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ABSTRACT

Updated were statistics of an earlier study done by the Education Commission of the States (ECS) in 1980, entitled "The Missouri School Finance Study." The recent results differed from the earlier study's, illustrating the extent to which revenues per pupil depended on local property wealth and income. The results of the first study indicated a marked decrease in the strength of the relationship between revenues per pupil and property wealth per pupil. Findings of the second study did not indicate a strong correlation between revenues per pupil and property wealth per pupil. A stronger relationship between revenues per pupil and income appeared. These results indicate that the goal of improving the fairness of the statewide system of school finance was not achieved and that the failure was not due to a defective method of apportionment but to an inadequate level of funding. Included is information on the state's increasing role in financing elementary and secondary education, on the effects of general economic conditions in the last decade, and on other matters pertinent to a general discussion of school finance. (SI)

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Missouri House of Representatives

Bob F. Griffin, Speaker

# THE EQUITY OF PUBLIC SCHOOL FINANCE IN MISSOURI: 1977 - 1981

A Research Report

by

Sharon Ryan and Anne Walker
of the House Research Staff

December, 1982

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## Foreword

This report is an outcome of a cost-sharing award from the National Conference of State Legislatures' Committee on Education and Labor. Funds for the award were made available to the Committee by the National Institute of Education under Contract Number 400-82-0005. The Missouri House of Representatives is grateful to the Committee for the award and for the encouragement and assistance the Committee and its staff have given.

The House of Representatives sought the NCSL-NIE award to enable it to develop and enhance its ability to deal with school finance issues, in particular to develop methods for evaluating the adequacy and equity of public school finance in Missouri.

Discussions and debates over school finance have occupied and will continue to occupy center stage for state policy makers. This report analyzes school finance in Missouri during a period in which major reforms were made in the way state aid is apportioned to the schools. In brief, the results of this analysis show that the goal of improving the fairness of the statewide system of school finance was not achieved in this period but the failure was not due to a defective method of apportionment but to an inadequate level of funding. The school aid formula would have worked better if more money had been available to be distributed through it. In 1982 the General Assembly and the voters of the state have addressed the level of funding and have provided significant new sources of moneys to the schools. Because these new moneys will be distributed essentially on a flat-grant basis, however, they are likely to have a regressive effect on the equity of the system. Thus major questions of policy remain. This report, both its methods and results, should contribute to the continuing debate.

B. Darrell Jackson
Project Director and
Director of Research

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The authors of this report are grateful to several people for their assistance in the preparation of this report. We are especially indebted to Turner Tyson, Jim Bliss, Bertha McClaskey and Larry Reynolds of the Missouri Department of Elementary and Secondary Education for their patient explanations and their prompt response to requests for data. Also essential to the statistical analysis in the report was the cooperation of George Hagedorn, Assistant Chief Clerk and Director of Information Systems for the Missouri House of Representatives and Viann Hardy, Director of the Division of Data Processing in the Missouri Department of Social Services. Finally, special thanks are due Marilyn Degenhardt for her careful typing of the manuscript.

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# THE EQUITY OF PUBLIC SCHOOL FINANCE IN MISSOURI: 1977 - 1981

## I. INTRODUCTION

The 1977 reform of Missouri's state aid formula reflected a national trend in the reform of state school finance systems.[1] A major force behind these reforms was litigation initiated by individuals and groups who believed their state's system of financing education to be unfair. Since local property taxes produce the major source of school revenue in most states, those districts with high property wealth have been able to generate and spend more dollars per pupil than districts with low property wealth. Unless some other equalization mechanism is in place, a student's educational opportunity within a state is directly dependent upon the wealth of the district in which he happens to live.

In a landmark case in the early 1970's, Serrano vs. Priest, the California Supreme Court found that California's school financing system violated the equal protection clause of both the California state constitution and the Fourteenth Amendment of the U.S. Constitution.[2] The court said that equal educational opportunity was being denied students in California because the quality of education, as measured by per-pupil expenditures, was directly dependent upon the wealth of the school district in which a student resided. The state, by distributing state aid on a flat grant or per pupil basis, did nothing to equalize the statewide disparities that existed under the system. A second issue raised in this case was that of "taxpayer burden equity". As illustrated on page 2, when a district has relatively low assessed valuation, its levy must be at a higher rate than a district with high assessed valuation to produce the same amount of revenue.

[1] House Bill 131, Codified in Chapter 163, Revised Statutes of Missouri, appears in Appendix B.

[2] Serrano vs. Priest, 96 cal. Rptr. 601, 487 p.2d 1241 (1971).

| | District A | District B |
|---|---|---|
| Assessed Valuation | 20,000,000 | 40,000,000 |
| Levy | X $4.25 | X $2.83 |
| Revenue | $ 850,000 | $ 850,000 |

Clearly, the taxpayer in District A bears a much greater burden than a taxpayer in District B with the same property value. The disparity in assessed valuation between districts may often be so great that it is virtually impossible for residents of low wealth districts to tax themselves at a rate which will produce per pupil revenues near those of high wealth districts.

Since the Serrano decision, school finance litigation has continued to focus attention on state school systems heavily dependent on local property wealth. The outcome of such litigation has been mixed. In 1973 the U.S. Supreme Court, in Rodriguez vs. San Antonio, found that there was no basis for the claim that the wealth dependent school financing system in Texas was unconstitutional under the Fourteenth Amendment to the U.S. Constitution.[3] However, in at least five states (California, Connecticut, New Jersey, Washington, and Wyoming) trial or state Supreme Courts have held that their school finance systems violated the equal protection or educational rights clauses of their state constitutions.[4]

The reform of school finance systems which has come out of this litigation has sought to improve the equity of the systems by decreasing the dependence of expenditures per pupil on local district wealth and by decreasing the disparity in expenditures per pupil from district to district.

[3]Rodriguez vs. San Antonio, 411 U.S.1 (1973).

[4]Brenda L. Biles and James G. Ward, Money and Education: A Guide to Missouri School Finance (National Institute of Education, July 1981), pp. 1-5.

It is the purpose of this report to evaluate the extent to which Missouri's formula for distributing state aid succeeds in reducing wealth dependence and expenditure disparities. An earlier report by Kathleen Adams and Allen Odden of the Education Commission of the States (ECS) had the same purpose.[5] Prepared for the School Finance Committee of the State Board of Education and covering the school years 1977, 1978, and 1979, the ECS report showed that although disparities among districts were not greatly reduced by the 1977 reforms, dependence of expenditures on local district wealth was significantly reduced by those reforms. Initially it was one of the goals of our study to simply update the Adams and Odden analysis by continuing it for the two succeeding school years for which full data is available, 1980 and 1981. It was found, however, that certain results of their study could not be replicated. (See further discussion below). Thus, our study has undertaken a full original analysis of the equity of Missouri's school finance system and an examination of the school aid formula to discover what factors are working against equity in the system. This report also includes information on the state's increasing role in financing elementary and secondary education, on the effects of general economic conditions in the last decade, and on other matters pertinent to a general discussion of school finance in this state.

[5] E. Kathleen Adams and Allen Odden. "The Relationship Between Property Tax Assessments, Tax Burdens and Missouri School Finance and the Equity Impacts of the 1977 Reform", The Missouri School Finance Study (Missouri Department of Elementary and Secondary Education, December, 1980), pp. 60-78.

## II SCHOOL FINANCE IN MISSOURI, 1977 - 1981

The 1977 reform of Missouri's school aid formula was accompanied by a commitment by the legislature to increased funding for elementary and secondary education under the revised "Foundation Program."[6] This program consists of three parts: 1) the minimum guarantee, 2) pupil transportation, and 3) the exceptional pupil program. Funds for pupil transportation and the exceptional pupil program are, by law, dispersed first, or "off the top", with the remainder distributed through the state aid formula. As the figures in Table 1 indicate, appropriations for the foundation program have exceeded the 1977 fiscal year appropriation by a total of over $500 million from 1978 to 1981. Pupil transportation costs have increased from 6.6% of the total appropriation in 1977 to 9.5% of the total in 1981.

TABLE 1

STATE REVENUES DISTRIBUTED UNDER THE FOUNDATION PROGRAM

| | BASIC GRANT | PUPIL TRANSPORTATION | EXCEPTIONAL PUPIL | TOTAL |
|---|---|---|---|---|
| 1976-77 | 364.6 M<br>(84.9%) | 28.3<br>(6.6%) | 36.1 M<br>(8.5%) | 429.0<br>(100.0%) |
| 1977-78 | 398.8 M<br>(82.7%) | 41.6 M<br>(8.6%) | 42.1 M<br>(8.7%) | 482.5<br>(100.0%) |
| 1978-79 | 430.4 M<br>(81.7%) | 46.2 M<br>(8.8%) | 50.2 M<br>(9.5%) | 526.8<br>(100.0%) |
| 1979-80 | 483.5 M<br>(81.4%) | 53.2 M<br>(9.0%) | 56.9 M<br>(9.6%) | 593.6<br>(100.0%) |
| 1980-81 | 551.6 M<br>(80.7%) | 65.2 M<br>(9.5%) | 66.8 M<br>(9.8%) | 683.6<br>(100.0%) |

During the period from 1977 to 1981, state revenues have become an increasingly large part of total revenues available to school

[6]The School Foundation Program: A Second Look (Missouri Department of Elementary and Secondary Education, January, 1980), p.14.

districts. As indicated in Table 2, state revenues accounted for 41.8% of total receipts to public schools in 1977, while local revenues made up 51.8%, with the remainder from federal funds. By 1981, 45.9% of total revenues came from the state, versus 46.6% from local sources. It is worth noting that in many school districts, state revenues account for much more than 50% of their total revenue. In 1981, over 90 of Missouri's 548 school districts received 60% or more of their current operating revenues from the state.

TABLE 2

RECEIPTS BY SOURCES AVAILABLE FOR CURRENT EXPENDITURES
(Millions of Dollars)

| | LOCAL | STATE | FEDERAL | TOTAL |
|---|---|---|---|---|
| 1976 - 77 | 569.1<br>(51.8%) | 459.4<br>(41.8%) | 70.1<br>(6.4%) | 1,098.6<br>(100%) |
| 1977 - 78 | 583.3<br>(48.8%) | 514.3<br>(43.0%) | 98.7<br>(8.2%) | 1,196.2<br>(100.0%) |
| 1978 - 79 | 631.6<br>(48.5%) | 563.8<br>(43.3%) | 106.1<br>(8.2%) | 1,301.5<br>(100.0%) |
| 1979 - 80 | 687.6<br>(47.8%) | 634.1<br>(44.1%) | 117.0<br>(8.1%) | 1,438.7<br>(100.0%) |
| 1980 - 81 | 749.5<br>(46.6%) | 738.2<br>(45.9%) | 120.9<br>(7.5%) | 1,608.6<br>(100.0%) |

The increase in state appropriations to Missouri's public schools has, however, been neutralized by inflation. Increased operating costs for salaries, supplies, and transportation have greatly lessened the positive impact that the increase in state aid might have had. Figure 1 illustrates actual total state, local and federal dollars available to Missouri school districts over the past ten years. Figure 2 illustrates the same revenue after adjustment for inflation by the consumer price index. In dollars adjusted for inflation, local revenues have actually declined over the past ten years.

FIGURE 1

RECEIPTS AVAILABLE FOR CURRENT EXPENDITURES

IN MISSOURI PUBLIC SCHOOLS

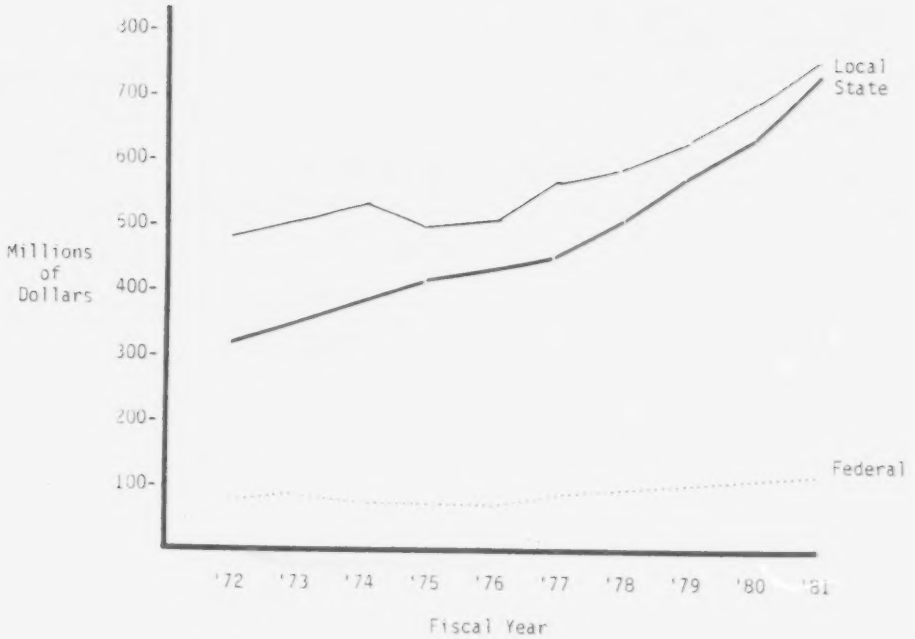


FIGURE 2

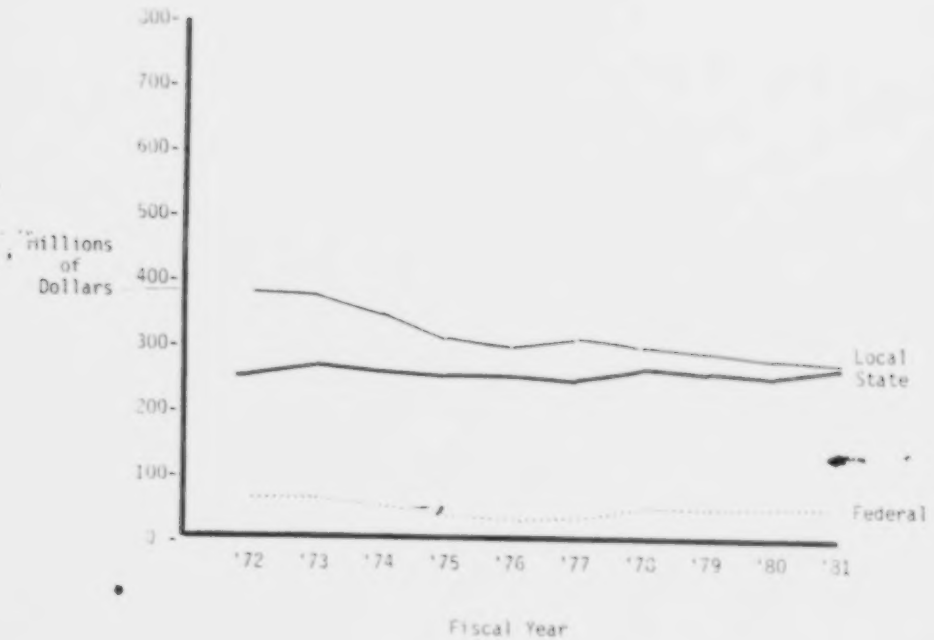
RECEIPTS AVAILABLE FOR CURRENT EXPENDITURES

IN MISSOURI PUBLIC SCHOOLS

IN DOLLARS ADJUSTED FOR INFLATION BY

CONSUMER PRICE INDEX

(BASE YEAR = 1967)



At the same time that inflation has driven up costs to school districts, it has also had a very negative impact on teachers' salaries. Although the average salary for a classroom teacher has increased in actual dollars from $8,291 in 1971 to $15,291 in 1981, the purchasing power of that salary, after adjustment for inflation, has declined by over 15%.

Another factor which has had a negative impact on the condition of many of Missouri's public schools is declining enrollment. Over the past six years, statewide fall enrollment has declined from 1,026,099 pupils for the 1976-77 school year to 818,705 pupils for the 1981-82 school year, a decline of 20%. Many districts with declining enrollment must pay for fixed costs of maintaining buildings and transportation systems, and growing salary costs for the more experienced teachers they retain. At the same time, they may be receiving approximately the same or less state aid, since that aid is dependent upon the number of eligible pupils in the district.

Finally, state and federal aid for education has been constrained in the past two years by shrinking general revenues as a result of recession and unemployment. In the 1982-83 school year, for example, over $30 million of funds appropriated for education are being withheld by the governor because of the state's poor financial condition.

Overall, the picture for Missouri school districts during the past few years has not been a bright one, as increased financial pressures due to increased costs and declining enrollments have forced staff lay-offs and curtailment of services in many districts. Two recently passed measures should help ease the financial pressures felt in Missouri's public education system. The first measure (House Bill 1548), enacted by the General Assembly and effective August 1982, is an increase in the state cigarette tax, with revenues earmarked for education. This increase is expected to generate an additional $26 million per year and will be distributed on the basis of average daily attendance, outside the school aid formula. The second measure (Proposition C), initiated by a citizen's petition sponsored by state educational groups, will become effective January 1, 1983. It provides for a one cent increase in the state sales tax, with 1/2 cent earmarked for education and the other 1/2 cent to be used for a property tax roll-back. It is expected to generate approximately $136 million annually for elementary

and secondary public schools. The sales tax measure also contains a provision for softening the effect of declining enrollment in calculating a district's state aid from the school aid formula. Under this provision, a district may use the eligible pupil count from the previous year or an average of the eligible pupil counts from the three previous years, whichever is greater. Under the sales tax measure, there will also be a cost of education index in the formula, which will increase aid to schools in urban areas. Revenues generated by the sales tax will be distributed outside the formula, on a per eligible pupil basis.

## III THE MISSOURI SCHOOL AID FORMULA

The distribution of state aid under Missouri's school finance system has been used to equalize educational opportunity among school districts for many years. Because districts vary in their ability to raise local revenues, more state aid has gone to less wealthy districts since the establishment of the first foundation program in 1955.[7] The core of the foundation program has consisted of a basic grant per eligible pupil or per Average Daily Attendance (ADA), less an amount which reflects a district's ability to raise local property tax revenue.

The 1955 foundation program provided a basic flat grant amount for a district based on ADA, less the tax revenues a district would generate with a $1.00 tax levy. There was also an allowance for non-resident pupils, one for isolated districts and a "teacher preparation" allowance.

In 1969, a new foundation program was enacted.[8] It provided a flat grant of $400 per ADA, $125 per AFDC recipient or orphan, $35 per summer school student, plus an additional amount per ADA for districts achieving a certain levy. From this was deducted the yield on a $1.25 tax rate and receipts from the railroad and utilities tax and the intangible tax.

The revision of the foundation formula in 1977 included the addition of a provision which would guarantee "equal yield for equal effort", called the guaranteed tax base add-on, and an income factor which is used as an estimate of local district wealth in addition to the local assessed valuation.[9]

The present formula consists of four main provisions:

1) the minimum guarantee
2) deductions
3) guaranteed tax base add-on
4) limited apportionment.

[7]Chapter 161, Missouri Revised Statutes, 1949.
[8]Chapter 163, Missouri Revised Statutes, 1969.
[9]Chapter 163, Missouri Revised Statutes, 1978.

The minimum guarantee is the amount per eligible pupil that the statutes set as a necessary "foundation" for a basic level of education in the state. The minimum guarantee for a district is 75% of the statewide average expenditure per eligible pupil, multiplied by the number of eligible pupils in the district. From this minimum guarantee, estimated local revenues are deducted. Where a district's estimated local revenues would not produce enough money to match the minimum guarantee, the formula is designed to make up the difference with state aid.

The guaranteed tax base add-on provides additional state aid for any district with a low property tax base and a tax levy at a certain level. If a district has an equalized assessed valuation per pupil that is lower than a specified amount, and also has an equalized operating levy greater than 57% of the statewide average tax levy, adjusted for that district's household income, it qualifies for additional state aid under the guaranteed tax base add-on.

The limited apportionment provision of the formula sets a limit on the amount of increase in state aid that may occur in any district from one year to the next. It also provides a method for prorating formula aid to each district.

The formula also includes a "hold-harmless" provision which guarantees that every district will receive at least $283 per eligible pupil through the school year 1983-1984, regardless of the amount it would otherwise be entitled to under the first four provisions of the formula.

A new factor which will be included in the formula and used for the first time in calculating state aid for the 1983-84 school year will be a cost-of-education index. It will be a ratio of a statistically predicted teacher salary for that district to the average predicted teacher salary for all school districts. The index is expected to benefit urban school districts, where teacher costs have been higher.

The Appendix provides an example of state aid calculations for a district for the 1981-82 school year, and a detailed description of each element of the formula.

## IV THE EQUITY OF MISSOURI'S SCHOOL AID FORMULA

One of the major goals of the 1977 reform of Missouri's school aid formula was to increase the fairness, or equity, of the statewide school finance system. While there may be disagreement over what constitutes a fair or equitable system, there are three interrelated issues which have often been raised in court tests of school finance systems.[10] The first issue focuses on the educational opportunity provided to children under the statewide system, as measured by expenditures per pupil. While it may be argued that expenditures do not always measure educational quality or opportunity, it is assumed that districts which spend more per pupil may hire more and better qualified teachers, offer a fuller curriculum, and build and maintain better physical facilities. The first equity issue is sometimes referred to as educational opportunity equity. The test for this concept of equity may be stated as, "Are expenditures per pupil relatively equal from one district to the next?"

The second equity issue involves the relationship between district wealth and revenues per pupil. In educational circles, this is known as fiscal neutrality. Under a fiscally neutral system, expenditures per pupil may vary across districts in the state as long as the variations are not dependent upon local district wealth. A state system may allow for local choices in the amount of money residents of various districts decide to spend for education, but the level of expenditures per pupil should not depend on local district wealth. In other words, residents of a low wealth district who value education highly should be able to offer their children the same educational opportunities as residents of high wealth districts. The 1977 school aid formula reform sought to decrease the relationship between expenditures per pupil and local wealth by including in the formula an estimate of local district wealth based on equalized assessed valuation, modified by an average household income factor. The test for this concept of equity may be stated as, "Are state and local per pupil revenues available for education independent of local district wealth?"

[10] Allan Odden and John Augenblick, School Finance Reform in the States: 1981 (Denver, Colorado: Education Commission of the States, January 1981), pp. 1-17.

The third equity issue, which was also addressed by the 1977 reform, was that of taxpayer equity. Under a system which is fair to all taxpayers, local property wealth should not determine the level of revenue a district is able to raise for education. The guaranteed tax base add-on provision of the revised formula was an attempt to address this issue by substituting state aid to make up the difference between what a district could raise from its local levy applied to its tax base and what it could raise from the same levy applied to a statewide figure, or guaranteed tax base. Thus, this provision was intended to guarantee "equal yield for equal effort". A test for this notion of equity may be stated as, "Are revenues per pupil available for education a function of local tax effort, regardless of property wealth or income?"

Tables 3-7 present several variables pertinent to the discussion of the issues of equity and Missouri's school finance system. For these tables, school districts were arranged from low to high according to total expenditures per pupil, and then divided into ten groups. The first group includes those districts that ranked in the lowest 10 per cent of all districts on expenditures per pupil, the second group ranked in the next lowest 10 per cent on expenditures per pupil, and so on. For each ten percent of the districts, or deciles, information is presented on the average expenditure per pupil, equalized assessed valuation per pupil, adjusted gross income, unadjusted operating levy, and state aid per pupil. Each decile includes approximately 50 districts. A cursory review of Table 3, the 1977 data, indicates that districts with the lowest expenditures per pupil also tended to be the districts with low assessed valuation, low income and low operating levies. As expenditures per pupil increase, so do the average values for property wealth, income, and operating levies. The average figures for state aid, on the other hand, are highest for those districts with low assessed valuation and income. The same overall patterns also appear for the years following 1977. The analysis that follows will focus on a closer examination of these variables and the effects of the 1977 reform of the school aid formula on the relationship of the variables to one another.

TABLE 3

MISSOURI SCHOOL FINANCE VARIABLES BY DECILES
OF EXPENDITURES PER PUPIL, 1977

| Decile | Mean Operating Expenditures per Eligible Pupil | Mean Equalized Assessed Valuation Per Eligible Pupil | Mean Adjusted Gross Income Per Return | Mean Operating Levy | Mean State Apportionment Per Eligible Pupil |
|---|---|---|---|---|---|
| 1 | $ 887 | $ 10,362 | $ 7,749 | $ 2.99 | $ 482 |
| 2 | 967 | 9,108 | 8,657 | 3.32 | 493 |
| 3 | 1,013 | 11,995 | 8,794 | 3.30 | 437 |
| 4 | 1,052 | 13,126 | 8,415 | 3.36 | 439 |
| 5 | 1,090 | 13,814 | 8,644 | 3.48 | 411 |
| 6 | 1,133 | 14,060 | 8,496 | 3.47 | 416 |
| 7 | 1,168 | 14,504 | 8,888 | 3.62 | 413 |
| 8 | 1,220 | 17,161 | 9,600 | 3.65 | 356 |
| 9 | 1,301 | 20,650 | 9,184 | 3.68 | 324 |
| 10 | 1,598 | 26,891 | 9,586 | 3.92 | 346 |
| Average | 1,243 | 16,194 | 8,801 | 3.48 | 414 |

TABLE 4
MISSOURI SCHOOL FINANCE VARIABLES BY DECILES
OF EXPENDITURES PER PUPIL, 1978

| Decile | Mean Operating Expenditures per Eligible Pupil | Mean Equalized Assessed Valuation Per Eligible Pupil | Mean Adjusted Gross Income Per Return | Mean Operating Levy | Mean State Apportionment Per Eligible Pupil |
|---|---|---|---|---|---|
| 1 | $ 996 | $ 12,603 | $ 8,913 | $ 3.09 | $ 538 |
| 2 | 1,085 | 14,313 | 9,216 | 3.37 | 505 |
| 3 | 1,129 | 13,633 | 9,545 | 3.47 | 521 |
| 4 | 1,175 | 16,259 | 8,829 | 3.49 | 492 |
| 5 | 1,220 | 17,647 | 8,785 | 3.55 | 455 |
| 6 | 1,265 | 17,145 | 9,252 | 3.55 | 462 |
| 7 | 1,316 | 19,314 | 9,868 | 3.69 | 427 |
| 8 | 1,386 | 21,079 | 9,831 | 3.73 | 406 |
| 9 | 1,481 | 24,025 | 9,362 | 3.90 | 377 |
| 10 | 1,827 | 29,187 | 10,401 | 4.00 | 354 |
| Average | 1,340 | 18,917 | 9,401 | 3.59 | 449 |

TABLE 5
MISSOURI SCHOOL FINANCE VARIABLES BY DECILES
OF EXPENDITURES PER PUPIL, 1979

| Decile | Mean Operating Expenditures per Eligible Pupil | Mean Equalized Assessed Valuation Per Eligible Pupil | Mean Adjusted Gross Income Per Return | Mean Operating Levy | Mean State Apportionment Per Eligible Pupil |
|---|---|---|---|---|---|
| 1 | $ 1,115 | $ 15,548 | $ 9,685 | $ 3.25 | $ 566 |
| 2 | 1,215 | 16,140 | 10,033 | 3.38 | 561 |
| 3 | 1,276 | 16,140 | 10,171 | 3.48 | 568 |
| 4 | 1,326 | 18,782 | 9,928 | 3.49 | 529 |
| 5 | 1,369 | 18,890 | 9,902 | 3.65 | 532 |
| 6 | 1,416 | 17,998 | 9,731 | 3.62 | 554 |
| 7 | 1,470 | 23,065 | 10,018 | 3.57 | 475 |
| 8 | 1,553 | 24,977 | 10,654 | 3.90 | 459 |
| 9 | 1,689 | 27,017 | 9,609 | 3.98 | 437 |
| 10 | 2,033 | 34,528 | 10,780 | 3.97 | 392 |
| Average | 1,486 | 22,178 | 10,052 | 3.63 | 498 |

TABLE 6
MISSOURI SCHOOL FINANCE VARIABLES BY DECILES
OF EXPENDITURES PER PUPIL, 1980

| Decile | Mean Operating Expenditures per Eligible Pupil | Mean Equalized Assessed Valuation Per Eligible Pupil | Mean Adjusted Gross Income Per Return | Mean Operating Levy | Mean State Apportionment Per Eligible Pupil |
|---|---|---|---|---|---|
| 1 | $ 1,281 | $ 17,228 | $ 10,810 | $ 3.37 | $ 669 |
| 2 | 1,388 | 17,413 | 10,374 | 3.38 | 687 |
| 3 | 1,455 | 18,777 | 11,157 | 3.58 | 668 |
| 4 | 1,509 | 21,780 | 10,732 | 3.55 | 620 |
| 5 | 1,562 | 21,251 | 10,786 | 3.69 | 638 |
| 6 | 1,624 | 24,405 | 11,117 | 3.76 | 582 |
| 7 | 1,684 | 25,121 | 10,774 | 3.73 | 581 |
| 8 | 1,786 | 28,956 | 11,569 | 3.85 | 539 |
| 9 | 1,938 | 33,942 | 10,760 | 3.93 | 498 |
| 10 | 2,362 | 39,183 | 11,521 | 4.30 | 464 |
| Average | 1,692 | 26,386 | 10,976 | 3.72 | 576 |

TABLE 7
MISSOURI SCHOOL FINANCE VARIABLES BY DECILES
OF EXPENDITURES PER PUPIL, 1981

| Decile | Mean Operating Expenditures per Eligible Pupil | Mean Equalized Assessed Valuation Per Eligible Pupil | Mean Adjusted Gross Income Per Return | Mean Operating Levy | Mean State Apportionment Per Eligible Pupil |
|---|---|---|---|---|---|
| 1 | $ 1,449 | $ 18,783 | $ 11,762 | $ 3.27 | $ 788 |
| 2 | 1,568 | 18,538 | 12,039 | 3.57 | 819 |
| 3 | 1,625 | 20,322 | 12,201 | 3.51 | 789 |
| 4 | 1,683 | 22,416 | 12,522 | 3.60 | 753 |
| 5 | 1,741 | 23,479 | 12,100 | 3.66 | 747 |
| 6 | 1,810 | 26,102 | 12,923 | 3.85 | 725 |
| 7 | 1,899 | 28,700 | 12,519 | 3.85 | 694 |
| 8 | 1,988 | 30,718 | 12,484 | 3.81 | 665 |
| 9 | 2,149 | 37,608 | 13,478 | 4.06 | 586 |
| 10 | 2,577 | 45,026 | 13,594 | 4.36 | 531 |
| Average | 1,916 | 29,841 | 12,557 | 3.76 | 678 |

A. Educational Opportunity Equity - "Are expenditures per pupil relatively equal from one district to the next?"

One way of evaluating the effect of the revised formula on per pupil expenditure differences among districts is to compare the highest spending district to the lowest spending district before and after the revision of the formula. Figure 3 illustrates the range in expenditures per pupil since 1977. Expenditures include revenue from local, state, and federal sources. In 1977, the Clayton school district of St. Louis County spent 4.41 times as much per pupil as the lowest spending district, Swedeborg of Pulaski County. In 1981, Clayton was still spending 3.49 times more per pupil than the lowest spending district, Laclede County C-5 School District. Figure 3 illustrates the most extreme examples of expenditure disparity. To neutralize the effect of such extreme values, it may be more reasonable to compare districts which rank at the fifth and ninety-fifth percentiles on expenditures per pupil. As indicated in Table 8, the district ranking at the ninety-fifth percentile in 1977 spent 1.68 times more for education than the district ranking at the fifth percentile. In 1981, that ratio remained almost the same as in 1977. The district ranking at the ninety-fifth percentile spent 1.65 times the amount of money for education as the district ranking at the fifth percentile in 1981.

TABLE 8

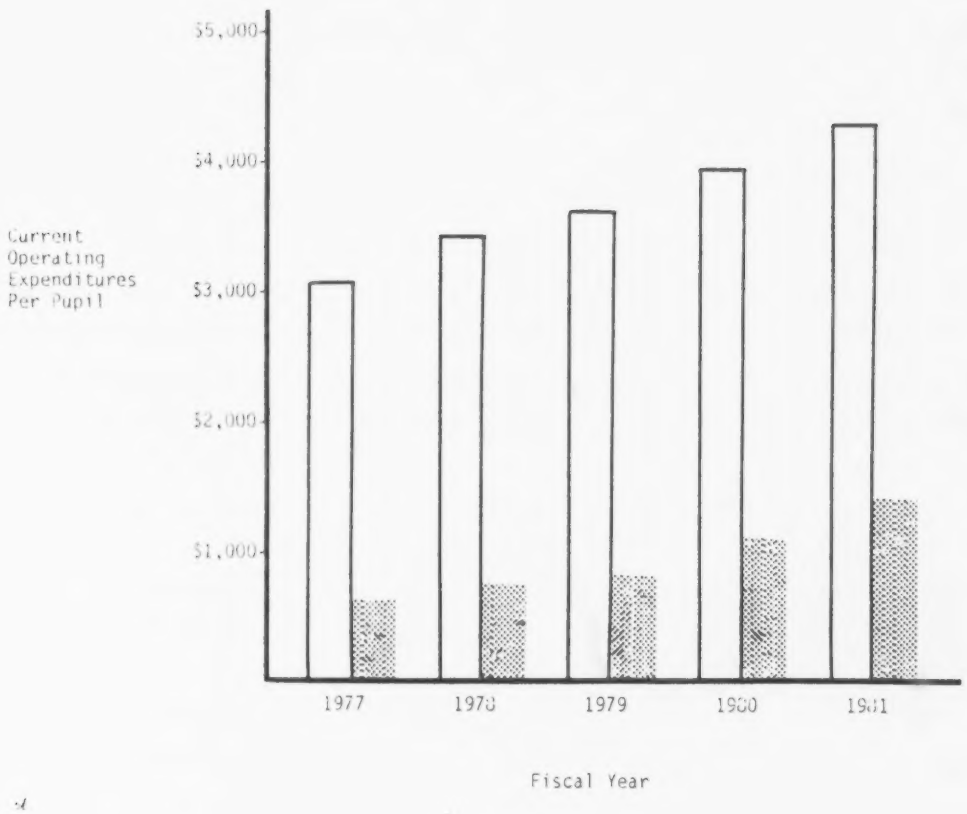
RANGE OF EXPENDITURES FOR DISTRICTS RANKING AT THE 5TH AND 95TH PERCENTILE ON EXPENDITURES PER PUPIL

| | 95th Percentile | 5th Percentile | Ratio |
|---|---|---|---|
| 1976 - 77 | $1,508.37 (N. Harrison R-III) | $ 899.30 (Blackwater R-II) | 1.68:1 |
| 1977 - 78 | $1,727.83 (Ridgeway R-V) | $1,022.13 (Fox C-6) | 1.69:1 |
| 1978 - 79 | $1,949.01 (Fillmore C-1) | $1,141.86 (Green Forest R-II) | 1.71 to 1 |
| 1979 - 80 | $2,232.54 (Affton) | $1,304.89 (Humansville R-IV) | 1.71 to 1 |
| 1980 - 81 | $2,420.44 (Ridgeway R-V) | $1,465.40 (Competition C-2) | 1.65 to 1 |

FIGURE 3

EXPENDITURE PER PUPIL DIFFERENCES BETWEEN

HIGHEST SPENDING AND LOWEST SPENDING SCHOOL DISTRICTS



If the changes in the school aid formula had made expenditures per pupil more equal across districts, we would expect the distribution of expenditures per pupil to vary less in 1981 than in 1977. A statistic which permits the comparison of the variability within two distributions is the coefficient of variation. It is the mean divided by the standard deviation; the higher the coefficient of variation, the greater the variability within a distribution. For 1977 the coefficient of variation is .187. For 1981 it is .184, indicating that the amount of variability in expenditures per pupil has changed very little since 1977.

B. Fiscal Neutrality - "Are revenues per pupil independent of local district wealth?"

Under the 1977 revised school aid formula, state aid is distributed to districts in inverse proportion to their local wealth. Tables 3-7 indicate that those districts with the lowest assessed valuation and lowest average income received the greatest amount of state aid. The school aid formula does work to distribute more state aid per pupil to less wealthy districts. However, there is still a rather strong relationship between state and local revenues per pupil and local district property wealth. Those districts with the highest local property wealth also tend to have the greatest state and local revenue per pupil.

Table 9 presents statistics which indicate the strength of the relationship between local property wealth per pupil (as measured by equalized assessed valuation) and state and local revenues per pupil. The two statistics used are the simple correlation coefficient and the elasticity. Two variables are said to be correlated if an increase in one variable is accompanied by an increase in the other variable. The value of the correlation coefficient ranges from -1 to +1. A value of zero indicates no relationship, a value of +1 indicates a strong positive linear relationship. The elasticity measure indicates the percentage change in one variable in response to a one percent change in another variable. In Table 9, the correlation coefficients and elasticities indicate a relatively strong relationship between local property wealth per pupil and state and local revenues per pupil. The strength of the relationship has not diminished in the years since 1977.

TABLE 9
STATISTICS INDICATING THE RELATIONSHIP
BETWEEN STATE AND LOCAL REVENUES PER PUPIL
AND PROPERTY WEALTH PER PUPIL

| | Correlation Coeffecient | Property Wealth Elasticity |
|---|---|---|
| 1976 - 77 | .77 | .27 |
| 1977 - 78 | .75 | .26 |
| 1978 - 79 | .74 | .27 |
| 1979 - 80 | .73 | .26 |
| 1980 - 81 | .74 | .26 |

The inclusion of the district income factor in the 1977 revised school aid formula was an effort to decrease the relationship between local wealth, as measured by income, and revenues available for educational expenditures. The measure of income used in the school aid formula and this analysis is the average adjusted gross income per return computed for all individuals in the local school district. As the statistics in Table 10 indicate, the relationship between income and state and local revenues per pupil was rather weak in 1977, and has changed little in the years since then.

TABLE 10
STATISTICS INDICATING THE RELATIONSHIP
BETWEEN STATE & LOCAL REVENUES PER PUPIL
AND INCOME

| | Correlation Coefficient | Income Elasticity |
|---|---|---|
| 1976 - 77 | .32 | .24 |
| 1977 - 78 | .27 | .18 |
| 1978 - 79 | .26 | .18 |
| 1979 - 80 | .26 | .19 |
| 1980 - 81 | .34 | .28 |

The analysis above has focused on the relationship between state and local revenues and local wealth. The rationale for using state and local revenues is that the state does not control the distribution of federal funds. However, it may be argued that examining the relationship between total expenditures, which includes federal funds, and local wealth would give a more accurate picture of the actual operation of the school finance system. Table 11 presents statistics indicating the relationship between total expenditures per pupil and local property wealth. As might be expected, when total expenditures are considered, the relationship between expenditures per pupil and local property wealth is less strong. However, the relationship, as measured by the correlation coefficient, has not diminished significantly since 1977.

TABLE 11

STATISTICS INDICATING THE RELATIONSHIP
BETWEEN TOTAL CURRENT EXPENDITURES
PER PUPIL AND PROPERTY WEALTH PER PUPIL

| | Correlation Coefficient | Property Wealth Elasticity |
|---|---|---|
| 1976 - 77 | .62 | .22 |
| 1977 - 78 | .53 | .22 |
| 1978 - 79 | .57 | .23 |
| 1979 - 80 | .59 | .23 |
| 1980 - 81 | .60 | .22 |

The relationship between total expenditures and income also appears to be less strong than the relationship between state and local revenues per pupil and income. Although there is some variation in the correlation coefficient since 1977, the statistics presented in Table 12 indicate that the weak relationship between total expenditures per pupil and income is approximately the same in 1981 as it was in 1977.

TABLE 12

STATISTICS INDICATING THE RELATIONSHIP
BETWEEN TOTAL CURRENT OPERATING EXPENDITURES
PER PUPIL AND INCOME

| | Correlation Coefficient | Property Wealth Elasticity |
|---|---|---|
| 1976 - 77 | .28 | .21 |
| 1977 - 78 | .24 | .18 |
| 1978 - 79 | .17 | .13 |
| 1979 - 80 | .15 | .12 |
| 1980 - 81 | .25 | .21 |

C. Taxpayer Equity - "Are state and local revenues per pupil a function of local effort, regardless of local property wealth and income?"

The addition of the guaranteed tax base add-on in the 1977 revision of the state aid formula was intended to permit districts to receive state aid as a substitute for local revenue they were unable to generate because of low tax bases. In the formula, the district's local adjusted tax levy is compared to a statewide average levy modified by the district income factor and then applied to a guaranteed tax base figure. If the levy is high enough, the district receives state aid as a substitute for the local revenue it would be able to generate against this relatively high tax base figure. Thus, the formula was intended to increase the taxpayer equity of the education financing system by helping districts to generate equal yield for equal effort, regardless of local property wealth or household income.

The statistics in Table 13 help to assess whether state and local revenues per pupil are a function of local effort, not local wealth. The statistic used for this analysis is the partial correlation coefficient. It is similar to the simple correlation coefficient in that a zero value indicates no relationship and a value of one indicates a strong relationship. However, with the partial correlation technique, it is possible to estimate the relationship between two variables while controlling for the effects of

other variables. In this case, the partial correlation coefficient measures the relationship between state and local revenues per pupil and local operating levies, over and above the effects of local property wealth and income. As the statistics in Table 13 indicate, there is a moderately strong relationship between state and local revenues and local effort, or tax levies, over and above the effects of property wealth and household income. The relationship has been relatively constant over the years. It appears that the education finance system in Missouri is working to provide a moderate degree of taxpayer equity. However, there has been little change in this factor since 1977.

TABLE 13

STATISTICS INDICATING THE RELATIONSHIP BETWEEN STATE & LOCAL REVENUES AND OPERATING LEVIES

| Year | Partial Correlation Coefficient |
|---|---|
| 1977 | .57 |
| 1978 | .59 |
| 1979 | .58 |
| 1980 | .48 |
| 1981 | .55 |

In summary, it appears that in the four years following the 1977 formula revisions there has been little reduction in the disparity in expenditures per pupil across districts, no decrease in the dependence of total state and local revenues per pupil on local wealth, and no increase in the degree to which state and local revenues are a function of local tax effort rather than local wealth.

These findings are at odds with some of the findings of the Education Commission of the State's study, as was noted above. Our findings are in agreement with the ECS study on expenditure per pupil disparities across districts - there has been no appreciable reduction of these disparities. The ECS report concluded, however, that the formula was working to reduce the

relationship between state and local revenues and local wealth.[11] Our figures clearly do not show that. We cannot explain the differences in results between the present study and the earlier one.[12] We are, nonetheless, comfortable with the correctness of our methods and the results we present.

[11]Adams and Odden, Missouri School Finance Study. In their study the correlation coefficient between state and local revenues per pupil and property wealth per pupil (Table 23, page 73) decreased from .70 in 1977 to .54 in 1978 and .52 in 1979. The correlation coefficient between state and local revenues per pupil and income per return (Table 27, page 77) decreased from .66 in 1977 to .61 in 1978 and .54 in 1979.

[12]Because of the difference in results between our study and the ECS study, we inquired of the authors as to their definition of certain variables and the number of observations used for their analysis. No specific documentation was available. One hypothesis tested was that their analysis excluded districts which have elementary schools only. Our analysis includes all districts except the two special school districts. It was found, however, that exclusion of the elementary districts from consideration does not change the results appreciably.

## V FACTORS CONTRIBUTING TO A LACK OF EQUITY

Missouri's school aid formula is designed to equalize educational opportunity for all students in Missouri, regardless of local wealth, and to provide a system which is fair to taxpayers. The preceding analysis has shown that the school finance system does provide a certain level of taxpayer equity, but has not been effective in reducing expenditure per pupil disparities or in breaking the link between state and local revenues per pupil and local wealth. It was hypothesized that there are two factors in the school aid formula that have worked to blunt the impact of the otherwise equalizing effects of the formula; the hold-harmless and limited apportionment provisions. The hold-harmless provision insures that every district receives at lease $283 per eligible pupil, regardless of what it would be entitled to under the other provisions of the formula. The limited apportionment provision limits the amount of increase that any district may receive from one year to the next, and provides a way of prorating available funds to all districts.

To test the hypothesis that the hold-harmless and limited apportionment factors were diluting the potential equalizing effects of the other formula factors, a simulation of the distribution of state aid for the years 1978 to 1981 was done. For each year, the district's apportionment calculated at line 10 of the formula was substituted for line 11 (See Appendix A). This simulates the elimination of the hold-harmless and limited apportionment adjustments that are made for each district.

The simulation showed that expenditure per pupil differences across districts would have been reduced by the elimination of the hold-harmless and limited apportionment provisions of the formula. By 1981, the ratio of the highest spending district to the lowest spending district would have been 2.88 to 1, versus the actual ratio of 3.49 to 1. The ratio of expenditures per pupil of the districts ranking at the ninety-fifth and fifth percentile on expenditures per pupil would have been 1.52 to 1 in 1981, versus the actual ratio of 1.65 to 1.

Under a formula without the hold-harmless and limited apportionment provisions, the relationship between state and local revenues per pupil and local property wealth would have been considerably reduced. As illustrated in

Table 14, the correlation coefficient for state and local revenues and equalized assessed valuation per pupil in 1981 would have been .42, versus the actual coefficient of .74. As illustrated in Table 15, the correlation between state and local revenues and income would have been .23 by 1981, versus the actual correlation coefficient of .34.

TABLE 14

SIMULATED
STATISTICS INDICATING THE RELATIONSHIP
BETWEEN STATE & LOCAL REVENUE PER PUPIL
AND PROPERTY WEALTH PER PUPIL WITHOUT THE LIMITED
APPORTIONMENT AND HOLD HARMLESS PROVISIONS

| | Correlation Coefficient | Property Wealth Elasticity |
|---|---|---|
| 1978 | .42 | .10 |
| 1979 | .40 | .10 |
| 1980 | .41 | .11 |
| 1981 | .45 | .11 |

TABLE 15

SIMULATED STATISTICS INDICATING
THE RELATIONSHIP BETWEEN STATE & LOCAL REVENUES
PER PUPIL AND INCOME PER PUPIL WITHOUT THE
LIMITED APPORTIONMENT AND HOLD HARMLESS PROVISIONS

| | Correlation Coefficient | Income Elasticity |
|---|---|---|
| 1978 | .10 | .05 |
| 1979 | .13 | .06 |
| 1980 | .15 | .08 |
| 1981 | .23 | .14 |

Taxpayer equity of the school finance system would also have been enhanced without the hold-harmless and limited apportionment provisions. The partial correlation coefficient for state and local revenues per eligible pupil and district operating levies, controlling for the effects of property

wealth and income, would have been .61 by 1982, versus the actual coefficient of .55.

Thus the school aid formula would have resulted in a greater degree of equity on all three measures without the hold-harmless and limited apportionment provisions. However, without the limited apportionment provision, considerably more funds would have been required. For the years 1978 to 1981, the appropriations needed to match the district entitlement calculated at line 10 of the formula for all districts would have been 25 to 30 percent greater than the actual appropriations. This would have required over $100 million additional state revenue annually. Most of the additional money would have been needed to negate the effect of the limited apportionment provision, since the hold-harmless provision only affects approximately $8 million dollars per year.

In summary, it appears that the major provisions of the formula are properly designed to equalize educational opportunity across the state and to enhance taxpayer equity. However, the limited apportionment and hold-harmless provisions have interfered with the equalizing functions of the formula. Eliminating the limited apportionment provision, which is most responsible for the interference, would have required significantly greater funding for education over the period 1977 to 1981.

## VI SUMMARY

This report has focused on the equity of Missouri's school finance system since the 1977 reform of the school aid formula. Three criteria were used to judge the fairness of the system and the effectiveness of the reforms.

The first criterion was educational opportunity equity, as measured by per pupil expenditures. The revised formula has made little improvement in reducing the disparity in expenditures per pupil across districts in the years since 1977.

The second criterion of equity was fiscal neutrality, or whether or not the amount of revenue per pupil available for education in most districts is dependent on local district wealth. Although the formula has distributed more state aid to less wealthy districts, it has not been enough to break the link between local property wealth and revenues available for education. There has been little change in the rather strong relationship between state and local revenues per pupil and local property wealth. The relationship between state and local revenues per pupil and household income was weak in 1977, and has remained weak in the years since then.

The third criterion was taxpayer equity, or whether the amount of revenue available for education is a function of local effort, not local wealth. On this score, the finance system appears more equitable. State and local revenues per pupil do appear to depend on local effort, regardless of local property wealth or level of income. But this has not been affected by the 1977 revisions.

The final part of our analysis involved hypothesizing that certain formula factors and the amount of funds distributed through the formula had affected the degree of equalization that the revised system was able to attain. A test of this hypothesis revealed that if the hold-harmless and limited apportionment provisions of the formula had not been in place during the years from 1978 to 1981, the three measures of equity would have been improved. However, significant increases in funding would have been necessary to avoid use of the limited apportionment provision.

The conclusion of this report is that the major provisions of the school aid formula are properly designed to achieve equity in the school finance system, but the lack of adequate funding--the limited apportionment provision--and the hold-harmless provision of the formula have interfered with the achievement of equity.

The hold-harmless provision of the formula will, by statute, be phased out at the end of the 1983-84 school year. However, the two recently passed measures which generate new revenue for education will have an effect similar to the hold-harmless provision, but on a much larger scale. Under HB 1548, the cigarette tax measure, revenues generated by the tax are to be distributed on a per Average Daily Attendance basis. Revenues from the sales tax increase mandated by Proposition C will be distributed on a per eligible pupil basis. Since these revenues are distributed outside the formula, this amounts to a return to a partial flat-grant system, in which wealthy districts receive the same amount per pupil as do poor districts. Existing disparities in educational opportunity will be maintained, since there will be no equalizing mechanism for the distribution of these funds.

NOTES ON THE DATA

All Missouri educational data used for this report came either from the Missouri Department of Elementary and Secondary Education's annual Report of the Public Schools or from its computer file tapes. Expenditure and revenue information came from the annual FD-5 computer file tape. Information on assessed valuation and income, etc. came from the formula payment computer file tape.

The statistics for the equity analysis were calculated using all districts except the special school districts of Pemiscot County and St. Louis County.

The definition of current operating expenditures is consistent with that used by the Department of Elementary and Secondary Education in its annual reports. It does not include expenditures for school food service or payments between schools. Adjustment was made for tuition receipts/payments between districts. Current operating expenditures per pupil were computed by dividing each district's total current operating expenditures by the number of eligible pupils for that school year.

The definition of state and local revenues includes all revenues received for the teacher, incidental and textbook fund, except for the line items for food service, student body activities, and community services. State and local revenues per eligible pupil were computed by dividing the sum of each district's state and local revenues by the eligible pupil count used for the state school aid payment for that year, which is the number of eligible pupils from the previous year.

## APPENDIX A

### DETAILS OF MISSOURI'S SCHOOL AID FORMULA

Figure 4 illustrates all the steps necessary to compute a sample district's apportionment for the 1981-1982 school year. The following discussion explains each step more fully.

**********
* MINIMUM GUARANTEE *
**********

Line 1 Eligible Pupils x .75 State Expenditure Factor

The number of eligible pupils from the previous school year is multiplied by 75% of the state expenditure factor.

State Expenditure Factor

The state expenditure factor represents a statewide average of expenditures per pupil for education. It is computed by dividing the state total of current operating expenditures for the second preceding year by the total number of eligible pupils from the second preceding year.

$$\text{State Expenditure Factor} = \frac{\text{Total statewide current operating expenditure}}{\text{Total eligible pupils}}$$

Eligible Pupils (E.P.)

Before the revision of the formula in 1977, the basis for distribution of state aid money was average daily attendance. Some districts, particularly those in urban areas, were at a disadvantage under this system, since their average daily attendance was often lower than their fall enrollment, or membership count. The new formula uses a combination of membership counts and average daily attendance to derive "eligible pupils". The number of eligible pupils is computed as follows, with data from the previous year:

Figure 4

EXAMPLE OF STATE AID FORMULA CALCULATIONS FOR
A MISSOURI SCHOOL DISTRICT, 1982

MINIMUM GUARANTEE

1. State Expenditure Factor (.75) x Eligible Pupils
   (1,777) x (.75) x (415.59) = 553,981

2. State Expenditure Factor (.75) x (AFDC + Orphans) x (.25)
   (1,777) x (.75) x (26 + 0) x (.25) = 8,665

3. Minimum Guarantee (Line 1 + Line 2)
   (553981 + 8665) = 562,646

DEDUCTIONS

4. Pupil WGT. Levy x (.57) x Dist. Income Factor x (Eq. Ass.Val./100)
   (2.61) x (.57) x (.9234) x (7,652,291/100) = 105,285

5. Fines, Forfeits, Escheats, ETC. (.57)
   (3,877.70) x (.57) = 2,210

6. Financial Institutions Taxes for School Purposes (.57)
   (-0-) x (.57) = 0

7. Total Deductions (Line 4 + Line 5 + Line 6)
   (105285 + 2210 + 0 ) = 107,495

8. Basic Apportionment (Line 3 - Line 7)
   (562,646 - 107,495) = 455,151

GUARANTEED TAX BASE ADD-ON

GTB SIDE 1 = (GTB - (Eq. Assessed Val/Eligible Pupils)) /100
(54141 - (7,652,291/415.59))/100 = 357.38

GTB SIDE 2 = (Adj Operating Levy) - (Pup. Wgt. Levy (.57) x Income Factor)
(2.03) - (2.61 x .57 x .9234) = .6541

9. GTB SIDE 1 x GTB SIDE 2 x Eligible Pupils
   (357.38) x (.6541) x (415.59) = 97,149

10. District Apportionment (Line 8 + Line 9)
    (455,151 + 97,149) = 552,300

LIMITED APPORTIONMENT

11. (Prev.Amt/E.P. + ((Line 10/E.P. - Prev.Amt/E.P.) x Adj. Factor) x EP
((387903/415.59 + ((552.300/415.59 - 387903/414.59) x .04169822)) x (415.59)
= 394,758

$$E.P = \frac{\frac{\text{September membership} + \text{January membership}}{2} + \text{Average Daily Attendance}}{2}$$

Under a change in the formula effective January 1, 1983, a district may use either the previous year's eligible pupil count or an average of the three previous year's counts. The change will help soften the impact of declining enrollment.

LINE 2 (ADC + Orphans) X .25 X .75 SEF

The formula recognizes special needs of disadvantaged children by allowing for additional aid for orphans and children receiving Aid to Families with Dependent Children. They are counted a second time on this line, effectively allowing 125% of the amount allowed for other pupils for AFDC and orphan children. This provision is especially helpful to urban districts with large numbers of disadvantaged children.

LINE 3 MINIMUM GUARANTEE = Line 1 + Line 2

**********
* DEDUCTIONS *
**********

LINE 4 Equalized Assessed Valuation

$$+ \frac{\text{RR \& Utilities Assessed Valuation}}{100} \times .57 \text{ Pupil Weighted Levy}$$

x District income factor

In this portion of the formula local wealth is estimated by the assessed valuation and average adjusted household income for each district. These factors are applied against a statewide average operating levy.

Equalized Assessed Valuation

Because the rate of assessment of property varies from one county to the next, the assessed valuation for each district must be equalized in order to estimate what each district's wealth is, relative to the next. State law requires that property be assessed annually at one-third of its true market

value. However, tax assessors throughout the state are not consistent in their assessment methods, nor in the frequency with which they reassess property. In order to provide a method for equalizing assessment, the state Tax Commission each year samples property from each county and estimates what the "true" rate of assessment should be. Equalized assessed valuation for a district is computed by multiplying the assessed valuation by one third, and dividing the product by the Tax Commission ratio for that county.

$$\text{Equalized Assessed Valuation} = \frac{\text{District assessed valuation of Business inventory, Real estate, Personal property, Locally assessed utilities} \times .3333}{\text{County tax ratio}}$$

Railroad and Utilities Assessed Valuation

A county's assessed valuation for railroad and utilities is based upon the number of miles of track or lines owned by the railroad or utility. The portion of the assessed valuation assigned to a school district is determined by prorating the county's railroad and utilities assessed valuation by the district's share of the county's enrolled pupils.

$$\text{District RR + Util Assessed Valuation} = \text{County RR + Util Assessed Valuation} \times \frac{\text{District enrolled pupils}}{\text{County enrolled pupils}}$$

In cases where district boundaries overlap county boundaries, the same procedure is done for each county, and the results summed.

Pupil Weighted Levy

The pupil weighted levy functions as a constant in the formula for all districts in any given year, and represents a current statewide average operating levy. It is calculated by multiplying each district's equalized operating levy by its number of eligible pupils, adding the products for all districts, and dividing by the total number of eligible pupils in the state.

All values used for this calculation are taken from the second preceding year. The pupil weighted levy appears twice in the formula. In each case it is modified by the district income factor.

$$\text{Pupil Weighted Levy} = \frac{\sum(\text{District equalized operating levy} \times \text{Eligible pupils})}{\text{Statewide total of eligible pupils}}$$

District Income Factor

The average income for each district is used in the formula as a measure of district wealth or ability to pay. The income factor is used to adjust the statewide pupil weighted tax levy to account for varying levels of income across districts. The income factor affects the amount of estimated local wealth calculated under the deductions section of the formula and the amount calculated under the guaranteed tax base add-on provision. The Department of Revenue provides the Department of Elementary and Secondary Education with an average adjusted gross income per return figure for each district based on the tax returns of individuals. It also provides a statewide average income figure. The basic ratio is then calculated for each district by dividing the district's average income by the statewide average income. To modify the impact of possible extreme ratios, a value of 1 is added to the result, and the total is divided by 2. Those districts having an average income per return greater than the statewide average will have an income factor of greater than 1, thus increasing the amount of their estimated local wealth and the amount of deductions in the formula.

$$\text{District Income Factor} = \frac{\frac{\text{District Average adjusted Gross Income Per Return}}{\text{Statewide Average Adjusted Gross Income}} + 1}{2}$$

LINE 5 .57 x Fines, Forfeits, Escheats, Etc.

LINE 6 .57 x Financial Institutions Taxes

Fifty-seven percent of all receipts from financial institution taxes, fines, forfeitures, and escheats received for school purposes are included as part of the estimate of a district's local revenues. Beginning with the

1983-84 school year, revenue received from the recently approved 1/2 cent sales tax for education will also be included as a deduction.

LINE 7 Line 4 + Line 5 + Line 6

Line 8 Basic Entitlement = Line 3 - Line 7

The basic entitlement shown on line 8 is simply the minimum guarantee minus the sum of the deductions for estimated local revenue.

**********
* GUARANTEED TAX BASE ADD-ON *
**********

GTB SIDE 1 = (GTB - (Eq. Assessed Val./Eligible Pupils))/100

GTB SIDE 2 = (Adj. Operating Levy) - (Pup.Wgt.Levy (.57) x Income Factor)

LINE 9 GTB SIDE 1 x GTB SIDE 2 x Eligible Pupils

The guaranteed tax base add-on is designed to increase state aid to districts with low local tax bases and resulting low tax revenues available for education. In order to receive state aid under this provision, a district must have an equalized assessed valuation per pupil less than the statewide guaranteed tax base (GTB) figure used in the formula. It must also tax itself at a rate which is at least equal to 57% of the statewide average tax levy (pupil weighted levy), adjusted by the income factor for that district. If the assessed valuation of a district is greater than the statewide GTB figure or the equalized operating levy is less than 57% of the pupil weighted levy, adjusted for income, the result of the calculation of this provision is negative, and there is therefore no "add-on" or additional state aid.

Guaranteed Tax Base

The guaranteed tax base figure is set by statute at a relatively high level so that most districts with low equalized assessed valuation willing to adequately tax themselves will benefit from this provision. In order to

arrive at the GTB figure, the Department of Elementary and Secondary Education annually ranks all districts in the state from low to high according to the total equalized assessed valuation per pupil. The GTB is equal to the equalized assessed valuation of the district containing the 85th to 90th percentile of all pupils. The percentile level has increased by one percent each year and will cap at the 90th percentile in the 1982-1983 school year. The GTB figure has increased from $24,238 in 1978 to $54,151 for 1982.

District Adjusted Operating Levy

Each district's operating levy is adjusted by the Tax Commission ratio in a manner similar to the adjustment made for equalized assessed valuation. This adjustment makes it possible to compare levys from one district to the next, based on the revenues they would generate against their tax base. The operating levy includes the sum of the tax ratio for the teachers, incidental, and building funds for the previous year.

$$\text{District Adjusted Operating Levy} = \frac{\text{Operating Levy} \times \text{Tax Commission Ratio}}{.3333}$$

LINE 10 Basic Entitlement + Guaranteed Tax Base Add-On
(Line 8 + Line 9) x Cost of Education Index

The district entitlement is the sum of the basic entitlement and the guaranteed tax base add-on. Beginning in school year 1983-84, the line 10 amount will be multiplied by the cost-of-education index.

Cost of Education Index

The cost of education index will become a factor in calculating state aid for the 1983-84 school year. The inclusion of the index is a result of a citizen's petition which was recently approved in a statewide referendum calling for a 1/2 cent sales tax increase for education. The petition defines the index as "the proportional relationship between a statistically predicted average teacher salary for that district and the average predicted teacher salary for all school districts in the state. The statistical procedures to

determine each district's cost of education index shall be based on statistically significant factors that are beyond the control of the district..." A statistical model for this index was developed by the Department of Elementary and Secondary Education, with the assistance of the Education Commission of the States. The model recognizes that education costs vary from one area of the state to another as a result of factors that are beyond the control of the districts. It focuses on teacher's salaries as the element which is most important in determining costs to a school district. The value of the index for districts with high costs will be greater than 1, and those with lower costs will have an index value of less than 1. The index will be applied in the formula at line 10.

**********
* LIMITED APPORTIONMENT *
**********

The statutes establishing the revised formula set a limit on the amount of increase that districts might receive from one year to the next. The limit of the increase is the difference between what a district received per eligible pupil in the previous year and the district's entitlement in the current year, multiplied by an adjustment factor.

LINE 11

$$\text{Current Apportionment} = \frac{\text{Apportionment Previous Year}}{\text{Eligible Pupils Previous Year}} +$$

$$\left( \frac{\text{Basic Entitlement}}{\text{Eligible Pupils}} - \frac{\text{Previous Year Apportionment}}{\text{Previous Year Eligible Pupils}} \right) \times \text{Adjustment Factor}$$

(multiplied by the current number of eligible pupils)

The effect of this provision has been to distribute to each district an amount per eligible pupil in the current year at least equal to the amount per pupil for the previous year, plus their share of additional revenues for the current year.

## Adjustment Factor

The adjustment factor limits increases and provides a way of prorating the total appropriation for education to each school district. From the total appropriation, funds for pupil transportation and the exceptional pupil program are deducted. The amount to be distributed to districts which fall under the hold-harmless provision is also deducted, since their entitlement is set by statute. The amount remaining is then compared to the totals of the sum of the remaining district's entitlements (line 10) for all remaining districts. The adjustment factor is then computed such that all remaining revenues are distributed to districts on a prorated basis. The adjustment factors have ranged from .18 in 1978 to a high of .267 in 1981 and a low of .042 for 1982.

## Hold-Harmless

The hold-harmless provision of the formula guarantees that all districts will receive at least $283 per pupil, regardless of their entitlement calculated under the formula. This provision will be in effect through the school year 1983-1984. The base amount of $283 must be adjusted each year by the per cent of change in the total appropriation from the previous year. The base figure for the 1981-1982 school year was $296.

If a district's apportionment per pupil is less than the amount per pupil received in 1976-77, or less than the amount received in the previous year, it is in the "hold-harmless" position. It will receive the larger of three options:

1) The base figure ($283) per pupil
2) the total calculated at line 10, or
3) a twenty-percent decline amount.

The third option is the difference between the previous year's amount of aid per eligible pupil and twenty percent of the difference between the amount received in 1976-77 per eligible pupil and the current aid (line 10 amount) per eligible pupil. It is calculated as follows:

$$\text{20\% Decline Amount} = \left(\frac{\text{Prev. Apportionment}}{\text{Prev. Eligible Pupils}} - .20\left(\frac{\text{76-77 Amount}}{\text{76-77 E.P.}} - \frac{\text{Line 10 Amount}}{\text{Eligible Pupils}}\right)\right) \times \text{EP}$$

APPENDIX B

REVISED MISSOURI STATUTES, 1978,

AND 1982 SUPPLEMENT

# Chapter 163

## STATE AID

Sec.


163.011. Definitions.
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163.111. State aid for new central high school buildings in reorganized districts.
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163.195. Disclaimer as to dollar amounts of future payments.


### CROSS REFERENCES

Federal funds available for part-time schools, RSMo 178.320
Vocational rehabilitation, RSMo 178.590 to 178.630

**163.011. Definitions.**—As used in this chapter unless the context requires otherwise:

(1) Adjusted gross income

(a) **"District adjusted gross income per return"** shall be the total Missouri individual adjusted gross income in a school district divided by the total number of Missouri income tax returns filed from the school district as reported by the state department of revenue for the second preceding year;

(b) **"State adjusted gross income per return"** shall be the total Missouri individual adjusted gross income divided by the total number of Missouri individual income tax returns, of those returns designating school districts, as reported by the state department of revenue for the second preceding year;

(c) **"District income factor"** shall be determined by taking one-half of the sum of 1.0 and the ratio of the district adjusted gross income per return to the state adjusted gross income per return;

(2) **"Average daily attendance"** means the quotient or the sum of the quotients obtained by dividing the total number of days attended in a term by resident pupils in grades kindergarten through twelve, inclusive, and between the ages of five and twenty by the actual number of days in that term but not including legal school holidays and legally authorized teachers' meetings. To the average daily attendance of full-time students shall be added the full-time equivalent average daily attendance of part-time students and the full-time equivalent average daily attendance of summer school students. "Full-time equivalent average daily attendance of part-time students" shall be computed by dividing the total hours attended by resident part-time students who are not subject to the provisions of section 167.031, RSMo, by the number of hours school was in session that term. "Full-time equivalent average daily attendance of summer school students" shall be computed by dividing the total number of hours attended by all summer school pupils by the number of hours in the regular school term;

(3) **"Eligible pupils"** shall be determined by adding membership to the average daily attendance and dividing the sum by two;

(4) **"Equalized assessed valuation of the property of a school district"** shall be determined by multiplying the assessed valuation times the percent of true value specified in section 137.115, RSMo, and dividing by either the percent of true value as determined by the state tax commission on or before February first preceding the fiscal year in which the evaluation will be effective or the average percent of true value for the highest three of the last four years as determined and certified by the state tax commission, whichever is greater. To the equalized locally assessed valuation of each district shall be added the assessed valuation of railroad and utility distributable property as determined by dividing the total assessed valuation of the distributable property within each county in which the district has territory by the total number of resident pupils enrolled in the public schools on the last Wednesday in September in each county in which the district has territory and multiplying the quotient thus obtained by the number of resident pupils enrolled in the public schools on the last Wednesday in September within that portion of each district lying wholly or partially within the county;



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(5) **"Guaranteed tax base"** means the amount of equalized assessed valuation per eligible pupil guaranteed each school district by the state in the computation of state aid. To compute the guaranteed tax base, school districts shall be ranked annually from lowest to highest according to the amount of equalized assessed valuation per pupil. During the 1977–78 school year, the guaranteed tax base shall be the amount of equalized assessed valuation per pupil of the school district in which the eighty-fifth percentile of the state aggregate number of pupils falls during the preceding year. During the 1978–79 school year and each year thereafter through 1982–83, the percentile level used to determine the amount of the guaranteed tax base shall be increased one percentile; thereafter the percentile level used in the determination of the guaranteed tax base shall be ninety;

(6) **"Membership"** shall be determined by dividing by two the sum of (1) the number of resident full-time students and the full-time equivalent number of part-time students who were enrolled in the public schools of the district on the last Wednesday in September of the previous year and who were in attendance one day or more during the preceding ten school days, (2) the number of resident full-time students and the full-time equivalent number of part-time students who were enrolled in the public schools of the district on the last Wednesday in January of the previous year and who were in attendance one day or more during the preceding ten school days, and (3) the full-time equivalent number of summer school pupils. "Full-time equivalent number of part-time students" is determined by dividing the total number of hours for which all part-time students are enrolled by the number of hours in the regular school term. "Full-time equivalent number of summer school pupils" is determined by dividing the total number of hours for which all summer school pupils were enrolled by the number of hours in the regular school term. "Full-time equivalent number of kindergarten pupils" is determined by dividing the number of such pupils in membership by two;

(7) **"Operating levy"** means the sum of tax rates levied for teachers, incidental, and building funds. To equalize the operating levy, multiply the aggregate tax rates for teachers, incidental, and building funds by * either the percent of true value, as determined by the state tax commission on or before February first preceding the fiscal year in which the evaluation will be effective, or the average percent of true value for the highest three of the last four years as determined and certified by the state tax commission, whichever is greater, and dividing by the percent of true value specified in section 137.115, RSMo;

(8) **"Orphans"**, resident children five years of age or older and under eighteen years of age who were enrolled in the public schools the previous September and who are supported in whole or in part by philanthropic or state organizations;

(9) **"Pupil-weighted levy"** shall be determined by multiplying the equalized operating levy in each district for the second preceding year by the eligible pupils of each district for that year and dividing the sum thereof for all districts of the state by the aggregate number of eligible pupils for that year of all districts of the state;

(10) **"Qualified aid to dependent children recipients"**, resident children five years of age or older and under eighteen years of age who were enrolled in the public schools the previous September and for whom aid to dependent children was allowed as certified by the division of family services;

(11) **"School purposes"** pertains to teachers and incidental funds;

(12) **"State-expenditure factor"** shall be determined by dividing the state total of current expenditures for the second preceding year by the number of eligible pupils in the state during that year;

(13) **"Teacher"** means any teacher, teacher-secretary, substitute teacher, supervisor, principal, supervising principal, superintendent or assistant superintendent, school nurse, social worker, or librarian who shall, regularly, teach or be employed for grades kindergarten through twelve more than one-half time in the public schools and who is certified under the laws governing the certification of teachers in Missouri.

(L. 1963 p. 200 § 4–1 and p. 333 § 161.021, A. L. 1967 p. 243, A. L. 1973 H. B. 38, H. B. 158, A. L. 1977 H. B. 130, H. B. 131, H. B. 187. Text taken from H. B. 131.
(Source: RSMo 1959 § 161.021)

* Word "by" does not appear in original rolls.

**163.013. Schools offering both kindergarten and transportation, state aid, how computed.**—Any school offering kindergarten and also offering transportation under section 167.231, RSMo, shall receive state aid for kindergarten students under the same formula as prescribed by law under section 163.161.

(L. 1967 p. 245 § 2)

**163.017. Kindergarten pupils, average daily attendance, how computed.**—For the purpose of determining state aid payments under section 163.031 on kindergarten attendance, "average daily attendance" shall be obtained by dividing one-half the total number of days attended by resident kindergarten pupils whose fifth birth-

day occurs before the first day of October after the first day of the school term, by the actual number of days that the school was in session not including legal school holidays and legally authorized teachers' meetings.

(L. 1967 p. 245 § 3, A. L. 1971 S. B. 171)

**163.021. Eligibility for state aid—requirements.**—A school district shall receive state aid for its education program only if it:

(1) Provides for a minimum of one hundred seventy-four days of actual pupil attendance as defined in section 160.041, RSMo, for each pupil or group of pupils;

(2) Maintains adequate and accurate records of attendance, personnel and finances, as required by the state board of education, which shall include the preparation of a financial statement which shall be submitted to the state board of education the same as required by the provisions of section 165.111, RSMo, for six-director elementary and high school districts;

(3) Levies a property tax of not less than one dollar and twenty-five cents for current school purposes on each one hundred dollars assessed valuation of the district;

(4) Computes average daily attendance as defined in subdivision (1)* of section 163.011. Whenever there has existed within the state an infectious disease, contagion, epidemic, plague or similar condition whereby the school attendance is substantially reduced for an extended period in any school year, the apportionment of school funds and all other distribution of school moneys shall be made on the basis of the school year next preceding the year in which such condition existed.

(L. 1963 p. 200 § 4-2, A. L. 1973 H. B. 38, A. L. 1982 S. B. 832)

(Source: RSMo 1959 § 161.025)

* Original rolls contain figure "(1)", but average daily attendance is actually defined in subdivision (2) of section 163.011.

(1972) The phrase "No levy for public schools or libraries shall be reduced below a point that would entitle them to participate in state funds" in § 137.073, RSMo, prohibits a reduction in the rate of levy to a point where no state funds would be available, i.e., a reduction below a rate of $1.00, and does not prohibit a reduction below a rate that would only cut off participation in additional state aid under § 163.031. Mo. Pacific Rd. Co. v. Kuehle (Mo.), 482 S.W.(2d) 505.

**163.031. Minimum aid—amount, how determined—source of funds, how spent.**—1. School districts which meet the requirements of section 163.021 shall be entitled to a minimum guarantee computed as follows: An amount determined by multiplying the number of eligible pupils by seventy-five percent of the state-expenditure factor, plus an amount determined by multiplying the number of qualified aid to dependent children recipients and orphans by twenty-five percent and multiplying the product thereof by seventy-five percent of the state-expenditure factor.

2. From the minimum guarantee for each district there shall be deducted an amount derived by multiplying fifty-seven percent of the pupil-weighted levy as adjusted by the district income factor by each one hundred dollars of the equalized assessed valuation of the property in the district the preceding year. Also, there shall be deducted fifty-seven percent of the amount received for school purposes from fines, forfeitures, escheats and intangible taxes.

3. To the amount calculated in subsections 1 and 2 of this section shall be added an amount to which a district is eligible under the guaranteed-tax-base provision which shall be calculated as follows: Multiply the difference between the guaranteed tax base less the equalized assessed valuation per eligible pupil of the school district for the last year divided by one hundred times the number of eligible pupils, times the difference obtained by subtracting fifty-seven percent of the equalized pupil-weighted levy as adjusted by the district income factor from the equalized operating levy for the district.

4. No district shall receive annually an amount per eligible pupil which is greater than the amount received the previous year plus twenty-five percent of the difference between the amount currently apportioned per eligible pupil under subsections 1, 2, and 3 and the amount per eligible pupil received the previous year. However, no district shall receive an amount greater than is provided by subsections 1, 2, and 3 of this act.* If the general assembly appropriates more or less funds than is necessary to meet the requirements of this section, the twenty-five percent limit shall be adjusted to allow for the distribution of available funds.

5. (1) During the 1977-78 school year, no school district shall receive less per pupil in average daily attendance than it was apportioned during the 1976-77 school year under the provisions of subsections 1, 2, 4, 6, and 7 of section 163.031, RSMo Supp.1976. In 1978-79 and each year thereafter for five years, those districts which would, under subsections 1, 2, and 3 of this section, be entitled to a smaller amount per eligible pupil than was received the preceding year shall receive a reduced amount per eligible pupil. Such reduction shall be twenty percent of the difference per eligible pupil between the entitlement under subsections 1, 2, and 3 and the amount per eligible pupil received under subsections 1, 2, 4, 6, and 7 of section 163.031, RSMo Supp.1976, during

the 1976–77 school year but in no instance shall a district receive less than the entitlement under subsections 1, 2, and 3 or two hundred eighty-three dollars per eligible pupil, whichever is greater. The two hundred eighty-three dollar base figure shall be multiplied annually by the same percent that the appropriation of state funds for the school foundation program is changed from the previous year and the product added to the amount per eligible pupil apportioned the previous year under this section. However, at no time shall the percent of this annual adjustment exceed the percent of annual adjustment for the mean average of the lowest five percent of the districts which receive an apportionment based upon subsections 1, 2, 3 and 4 of this section.

(2) State aid based upon subsections 1 through 6 of this section may be determined as follows:

**Minimum Guarantee**

1. Number of Eligible Pupils × (75% of State-expenditure Factor) ..... $ ___
2. (ADC + Orphans) × .25 × (75% of State-expenditure Factor) ..... $ ___
3. Total Minimum Guarantee (Line 1 plus Line 2) ..... $ ___

**Deductions**

4. Equalized A/V / $100 × (87% of Pupil-weighted Levy × district income factor) ..... $ ___
5. Fines, Forfeitures, Escheats, et cetera (87% of the amount received the previous year for school purposes) ..... $ ___
6. Intangible Taxes (87% of the amount received the previous year for school purposes) ..... $ ___
7. Total Deductions (Sum of Lines 4, 5, and 6) ..... $ ___
8. Basic Entitlement (Line 3 minus Line 7) ..... $ ___

**Guaranteed Tax Base (GTB) Add-on**

9. (GTB minus Dist. Equal. A/V per eligible Pupil) ÷ 100 × Number of Eligible Pupils × (Dist. Equal. operating Levy minus fifty-seven percent of the Pupil-weighted Levy district income factor) ..... $ ___ (cannot be less than "0")
10. District Entitlement (line 8 plus Line 9) ..... $ ___
11. Apply hold-harmless or maximum increase clause to Line 10 ..... $ ___

6. The state board of education shall, at the time of making the annual apportionment, apportion special state aid as now or hereafter provided by section 163.161 building aid as provided by law, and the aid provided by section 162.975, RSMo.

7. A school district shall spend for teachers' salaries each year at least seventy-five percent of the state school funds received under subsections 1, 2, and 3 of this section and under section 162.975, RSMo, and as much of the revenue produced by local tax levies as was spent per eligible pupil for teachers' salaries the previous year. In the event a district fails to comply with this provision, the amount by which the district fails to spend funds as provided herein shall be deducted from the district's apportionment for the following year, provided that the state board of education may exempt a school district from this provision if the state board of education determines that circumstances warrant such exemption.

(L. 1963 p. 200 § 4–3 and p. 335 § 161.031, A. L. 1965 p. 284, A. L. 1965 2d Ex. Sess. p. 894, A. L. 1967 p. 246, A. L. 1967 1st Ex. Sess. p. 881, A. L. 1969 p. 268, A. L. 1975 H. B. 945, A. L. 1976 S. B. 524, A. L. 1977 H. B. 131)

(Source: RSMo 1959 §§ 161.031, 161.061)

* Probably should say "this section".

**163.033. Determination of true value ratios for the year 1977.**—Notwithstanding the provisions of section 163.031, the average percent of true value ratios determined by the state tax commission for year 1977 and certified to the department of education in 1978 shall be disregarded and the state tax commission shall before April 1, 1978, submit the average true value ratios to be used in lieu thereof for the year 1977 in determining the equalized assessed valuation of the property of a school district for distributions of school foundation formula funds.

(L. 1978 H. B. 1822 § 1)
Effective 3-22-78

**163.036. Estimates of average daily attendance—authorized—error, effect of.**—In computing the amount of state aid a school district is entitled to receive under section 163.031, a school district may estimate the number of eligible pupils for the ensuing year instead of using the number of eligible pupils for the past year. Any error made in the apportionment of state aid because of a difference between the actual number of eligible pupils and the estimated number of eligible pupils shall be corrected as provided in section 163.091, except that if the amount paid to a district estimating eligible pupils exceeds the amount to which the district was actually entitled by more than five percent, interest at the rate of six percent shall be charged on the excess and shall be added to the amount to be deducted from the district's apportionment the next succeeding year.

**163.041. Computation of average daily attendance for first apportionment to reorganized district.**—The average daily attendance for the first apportionment of state school moneys to any enlarged school district organized under the provisions of sections 162.101 to 162.201, RSMo, shall be computed by adding together the total average daily attendance in each district that has become a component part of the enlarged district.

(L. 1963 p. 200 § 4-4)
(Source: RSMo 1959 § 165.703)

**163.051. Forced closing of school—state aid based on prior year's attendance.**—The state board of education, in the apportionment of the state school moneys fund, may use the average daily attendance of the next full year preceding or project the average daily attendance for the current year based on the average daily attendance for the last fifty days the schools of the district were in session before the schools were forced to close before the expiration of the term or before average daily attendance dropped substantially because of a disaster caused by flood, fire, windstorm or any natural disaster when all or part of the district is designated a disaster area by the governor of the state, or when districts have been forced to close because of nonpayment of taxes as a result of flooding or drouth conditions or because of loss of surplus funds occasioned by bank failures in any county of the state.

(L. 1963 p. 200 § 4-5, A. L. 1973 H. B. 38)
(Source: RSMo 1959 § 161.070)
Effective 6-27-73

**163.061. Allocation of state aid to district funds.**—Not less than eighty percent of the state school moneys received under the provisions of subsections 1, 2 and 3 of section 163.031 shall be placed in the teachers' fund and the remaining percent of such moneys in the incidental fund.

(L. 1963 p. 200 § 4-6)
(Source: RSMo 1959 § 161.045)

**163.071. State aid for pupils residing on federal lands.**—When an approved educational program is provided for pupils residing on federal lands under section 171.101, RSMo, by any district, the district is entitled to all state aid as provided by section 163.031 with respect to pupils residing within the district outside of the federal lands, and it is also entitled to state aid for pupils residing on federal lands in an amount to be determined as follows: The total amount apportioned to the district by the state under section 163.031 for resident pupils shall be divided by the average daily attendance of resident pupils in the district and the quotient resulting shall be multiplied by the number of pupils in average daily attendance in grades one through twelve residing on the federal lands. The additional state aid under this section shall be paid in the same manner as other apportionments made under section 163.031.

(L. 1963 p. 200 § 4-7)
(Source: RSMo 1959 § 161.035)

**163.081. Secretary to report to state department, when, contents, penalty—duties of state board of education to calculate state aid, distribution, when.**—1. Between June fifteenth and June thirtieth each year the secretary of each school district shall make a report to the state department of elementary and secondary education which shall contain all necessary data for calculating the amounts of state support which each district is to receive for the following school year. The report shall be sworn to before a notary public or the county clerk. Reports shall be forwarded to the state board of education on or before July fifteenth. Any district secretary, superintendent or teacher who knowingly furnishes any false information in the reports, or neglects or refuses to make the reports, is guilty of a misdemeanor and shall be punished by a fine of not more than five hundred dollars or imprisonment in the county jail for not more than six months or by both such fine and imprisonment.

2. Until July 1, 1982, the state board of education upon receipt of the report from the school district shall calculate the amount which each school district is to receive and on or before September fifteenth of each year shall distribute all moneys available August thirty-first to the several districts. Additional distributions of all moneys available November thirtieth and February twenty-eighth shall be made on or before December fifteenth and March fifteenth of each school year. The state board of education shall certify the amounts so apportioned to the commissioner of administration for his approval and warrants shall be issued payable to the several school districts of the state and forwarded to them. Beginning July 1, 1982, the moneys appropriated for the state schools in any such year shall be distributed to the several districts entitled thereto through twelve monthly disbursements. Each of the first six monthly disbursements during any fiscal year shall be equal to one-twelfth of the total amount appropriated for such purpose. Each of the remaining six monthly disbursements shall be in an amount which shall not be less than seven and one-half percent of the total appropriation; provided, however, that the total disbursements through the twelve payments shall not exceed the total amount appropriated for such purpose.

(L. 1963 p. 200 § 4-8 and p. 338 § 161.051, A. L. 1973 H. B. 158, A. L. 1977 H. B. 130, A. L. 1982 H. B. 1450)
(Source: RSMo 1959 § 161.051)
Effective 2-18-82

**163.083. Emergency money distribution, when.**—1. For fiscal year ending June 30, 1982, if all moneys appropriated to be distributed as provided in sections 163.081 and 163.082 have not been distributed through the four distributions heretofore provided for, an emergency distribution may be made before the close of that fiscal year of any amount up to that amount necessary to meet the amount appropriated.

2. When distributing the state aid authorized by the provisions of sections 162.935, 162.975, 162.980, 162.985, 162.900, 162.990, 163.031 and 163.161, RSMo, the state treasurer may, in any year if requested by a school district, disregard the provision in section 30.180, RSMo, requiring the treasurer to convert the warrant requesting payment into a check or draft and wire transfer the amount to be distributed to the school district directly to the school district's designated depositary for credit to the school district's account.

(L. 1977 H. B. 130 § 5, A. L. 1982 H. B. 1450)
Effective 2-18-82

**163.091. Correction of errors in apportionment of state aid.**—The state board of education may correct any error made in the apportionment of the state school moneys fund among the various counties of this state out of the state school moneys fund of the year next following the date when the mistake was made. The state board of education shall certify the amount set apart to any school district for the purpose of correcting any error to the commissioner of administration, and the commissioner of administration shall certify the amount so apportioned for proper payment, and the district treasurer shall credit the funds as the funds of the year in which the error occurred. If any district has received funds in excess of the amount to which it was entitled, its apportionment for the next succeeding year shall be reduced accordingly.

(L. 1963 p. 200 § 4-9, A. L. 1977 H. B. 130, S. B. 82)
Source: RSMo 1959 § 161.080)

**163.111. State aid for new central high school buildings in reorganized districts.**—Whenever a district organized under the provisions of sections 162.211 and 162.221, RSMo, has secured a site of not less than five acres for the central high school building of the district and has erected thereon, in accordance with plans and specifications approved by the state board of education, a school building suitable for a central school and containing one large assembly room for the meeting of the citizens of the district and has installed a modern system of heating and ventilating, the state shall pay one-fourth of the cost of the building and equipment; but the amount paid by the state shall not exceed two thousand dollars for any one building. The state of Missouri, out of that part of the state revenue set aside for the support of the free public schools, shall make adequate appropriations for carrying out the provisions of this section. The money due any district, when approved by the commissioner of administration, shall be remitted to the treasurer of the district on receipt of a certificate from the state board of education stating that the conditions herein prescribed have been complied with.

(L. 1963 p. 200 § 4-11, A. L. 1977 H. B. 130, S. B. 82)
(Source: RSMo 1959 § 161.130)

**163.121. State aid for new buildings in reorganized districts.**—All school districts enlarged under sections 162.101 to 162.201, RSMo, in which the erection of one or more new school buildings or additions to one or more existing buildings is made necessary by reason of the reorganization, shall receive state aid in the amount of one-half of the cost of the buildings, additions, and equipment up to twenty-five thousand dollars for any enlarged district. Any district formed under sections 162.101 to 162.201, RSMo, shall receive the building aid in the amount of one-half of the cost of the buildings, additions, and equipment at the rate of one hundred dollars per pupil times the total number of pupils currently enrolled in the schools of the district as certified by the board of education of the district to the state board of education when the amount exceeds twenty-five thousand dollars, but total state aid for this purpose shall not exceed fifty thousand dollars for any enlarged district. All building plans shall be approved by the state board of education. When the conditions herein prescribed have been complied with, and when at least one-half of the building program has been completed as determined by the state board of education, one-half of the money due any enlarged school district shall be certified by the state board of education to the commissioner of administration for his approval and a warrant shall be issued for the amount due and payable to the treasurer of the district. Upon the completion of the building program the balance of the money due any enlarged school district shall be certified by the state board of education to the commissioner of administration for his approval and a warrant shall be issued for the balance due and payable to the treasurer of the district.

(L. 1963 p. 200 § 4-12, A. L. 1977 H. B. 130, S. B. 82)
(Source: RSMo 1959 § 165.697)

**163.161. State aid for transportation of pupils.**—1. Any school district which makes provision for transporting pupils as provided in sections 162.621, 167.231 and 167.241, RSMo, shall receive state aid for the ensuing year for such transportation on the basis of the cost of pupil transportation services provided the current year. A district shall receive an amount not greater than eighty percent of the allowable costs of providing pupil transportation services to and from school and to and from public accredited vocational courses, except that in no case shall a district receive an amount per pupil greater than one hundred twenty-five percent of the state average approved cost per pupil transported the second preceding school year. The state board of education shall approve all bus routes and determine the total miles each district should have for effective and economical transportation of the pupils and shall determine allowable costs. No state aid shall be paid for the costs of transporting pupils living less than one mile from the school. However, if the state board of education determines that circumstances exist where no appreciable additional expenses are incurred in transporting pupils living less than one mile from school, such pupils may be transported without increasing or diminishing the district's entitlement to state aid for transportation.

2. State aid for transporting handicapped and severely handicapped students attending classes within the school district or in a nearby district under a contractual arrangement shall be paid in accordance with the provisions of subsection 1 and an amount equal to eighty percent of the additional cost of transporting handicapped and severely handicapped students above the average per pupil cost of transporting all students of the district shall be apportioned where such special transportation is approved in advance by the department of elementary and secondary education. State aid for transportation of handicapped and severely handicapped children in a special school district shall be eighty percent of allowable costs as determined by the state board of education which may for sufficient reason authorize amounts in excess of one hundred twenty-five percent of the state average approved cost per pupil transported the second previous year. In no event shall state transportation aid exceed eighty percent of the total allowable cost of transporting all pupils eligible to be transported.

(L. 1963 p. 200 § 4-16 and p. 335 § 165.143, A. L. 1965 p. 284, A. L. 1969 p. 268, A. L. 1973 H. B. 158, A. L. 1977 H. B. 131, A. L. 1978 H. B. 969, A. L. 1980 H. B. 1633)

(Source: RSMo 1959 § 165.143)

**163.191. State aid to community junior college districts and school districts providing junior colleges—community junior college defined—programs offered outside districts.**—1. All students, resident in the state of Missouri, attending schools or classes of a community junior college district shall be included in the attendance records of the community junior college district for the apportionment of school funds. Each year each community junior college is eligible to receive from state funds, if funds are available and appropriated, an amount up to but not more than fifty percent of the state average operating cost per credit hour as approved by the department of higher education. The average operating cost per credit hour shall be determined by dividing the total operating cost for all community junior college districts receiving state aid by the total number of eligible credit hours produced by the community junior college districts. The department of higher education shall review all institutional budget requests and prepare appropriation recommendations annually for the public community junior colleges under its supervision. The department's budget request shall include a recommended level of funding per academic and other nonoccupational or nonvocational credit hour and an increased level of funding per occupational or vocational credit hour. The recommendation shall also include the number of approved credit hours in each category for each public community junior college. Both current operating costs and the number of eligible credit hours produced shall be estimated on the then current year, to be adjusted on actual operating costs incurred and the actual number of eligible credit hours produced at the end of the year. A **"year"** is defined as from July first to June thirtieth of the following year. The term **"operating costs"** means all those costs attributable to current operation of the district including all direct costs of instruction, instructors' and counselors' compensation, administrative costs, all normal operating costs and all similar noncapital expenditures during

any year, but excluding costs of construction of facilities and purchases of equipment and furniture and other capital items. Current operating costs shall be computed under accounting methods and procedures to be specified by the state department of higher education. The term **"eligible credit hours produced"** means for the purpose of such claims actual participation through the fourth week of the session the course is offered. In the case of eligible credit hours produced in a summer session, the claim for reimbursement shall be presented in the claim covering that particular school year in which the summer session ends.

2. School districts offering two-year college courses under section 178.370, RSMo, on October 31, 1961, shall receive state aid under subsection 1 if all scholastic standards established under and pursuant to sections 178.770 to 178.890, RSMo, are met.

3. In order to make postsecondary educational opportunities available to Missouri residents who do not reside in an existing community junior college district, community junior colleges organized under the provisions of section 178.370, RSMo, or sections 178.770 to 178.890, RSMo, shall be authorized under the funding provisions of this section to offer courses and programs outside the community junior college district with prior approval by the coordinating board for higher education. The classes conducted outside the district shall be self-sustaining. Provided, however, that courses and programs offered outside of the community junior college district shall not be used to increase the amount of funding for which the community junior college offering the courses and programs is eligible under subsection 1.

4. A **"community junior college"** is an institution of higher education deriving financial resources from local, state, and federal sources, and providing postsecondary education primarily for persons above the twelfth grade age level, including courses in (a) liberal arts and sciences, including general education; (b) occupational, vocational-technical; and (c) a variety of educational community services. Community junior college course offerings lead to the granting of certificates, diplomas, and/or associate degrees, but do not include baccalaureate or higher degrees.

(L. 1963 p. 200 § 4-19, A. L. 1965 p. 287, A. L. 1967 p. 249, A. L. 1972 S. B. 384, A. L. 1975 H. B. 526, A. L. 1981 S. B. 2)

APPENDIX C

SECTIONS OF MISSOURI STATUTES AFFECTED
BY NOVEMBER 1982 REVISIONS (PROPOSITION C)

# CHAPTER 163

## STATE AID

Sec.
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163.013 Schools offering both kindergarten and transportation, state aid, how computed.
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163.161 State aid for transportation of pupils.
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163.196 Disclaimer as to dollar amounts of future payments.

**163.011. Definitions**—As used in this chapter unless the context requires otherwise:

(1) Adjusted gross income

(a) **"District adjusted gross income per return"** shall be the total Missouri individual adjusted gross income in a school district divided by the total number of Missouri income tax returns filed from the school district as reported by the state department of revenue for the second preceding year;

(b) **"State adjusted gross income per return"** shall be the total Missouri individual adjusted gross income divided by the total number of Missouri individual income tax returns, of those returns designating school districts, as reported by the state department of revenue for the second preceding year;

(c) **"District income factor"** shall be determined by taking one-half of the sum of 1.0 and the ratio of the district adjusted gross income per return to the state adjusted gross income per return;

(2) **"Average daily attendance"** means the quotient or the sum of the quotients obtained by dividing the total number of days attended in a term by resident pupils in grades kindergarten through twelve, inclusive, and between the ages of five and twenty by the actual number of days in that term but not including legal school holidays and legally authorized teachers' meetings. To the average daily attendance of full-time students shall be added the full-time equivalent average daily attendance of part-time students and the full-time equivalent average daily attendance of summer school students. **"Full-time equivalent average daily attendance of part-time students"** shall be computed by dividing the total hours attended by resident part-time students who are not subject to the provisions of section 167.031, RSMo, by the number of hours school was in session that term. **"Full-time equivalent average daily attendance of summer school students"** shall be computed by dividing the total number of hours attended by all summer school pupils by the number of hours in the regular school term;

(3) **"Cost of education index"** for a school district shall be the proportional relationship between a statistically predicted average teacher salary for that district and the average predicted teacher salary for all school districts in the state. The statistical procedure to determine each district's cost of education index shall be based on statistically significant factors that are beyond the control of the district and shall be established by the department of elementary and secondary education following the rulemaking process set forth in chapter 536, RSMo, including a public hearing on the procedure proposed. Any rule proposed pursuant to this subsection shall be submitted to the committee on administrative rules which shall review and report on the rule as provided in section 536.037, RSMo;

(4) **"Eligible pupils"** shall be determined by adding membership to the average daily attendance and dividing the sum by two;

(5) **"Equalized assessed valuation of the property of a school district"** shall be determined by multiplying the assessed valuation times the percent of true value specified in section 137.115, RSMo, and dividing by either the percent of true value as

determined by the state tax commission on or before February first preceding the fiscal year in which the valuation will be effective or the average percent of true value for the highest three of the last four years as determined and certified by the state tax commission, whichever is greater. To the equalized locally assessed valuation of each district shall be added the assessed valuation of railroad and utility distributable property as determined by dividing the total assessed valuation of the distributable property within each county in which the district has territory by the total number of resident pupils enrolled in the public schools on the last Wednesday in September in each county in which the district has territory and multiplying the quotient thus obtained by the number of resident pupils enrolled in the public schools on the last Wednesday in September within that portion of each district lying wholly or partially within the county;

(6) **"Guaranteed tax base"** means the amount of equalized assessed valuation per eligible pupil guaranteed each school district by the state in the computation of state aid. To compute the guaranteed tax base, school districts shall be ranked annually from lowest to highest according to the amount of equalized assessed valuation per pupil. During the 1977-78 school year, the guaranteed tax base shall be the amount of equalized assessed valuation per pupil of the school district in which the eighty-fifth percentile of the state aggregate number of pupils falls during the preceding year. During the 1978-79 school year and each year thereafter through 1982-83, the percentile level used to determine the amount of the guaranteed tax base shall be increased one percentile; thereafter the percentile level used in the determination of the guaranteed tax base shall be ninety;

(7) **"Membership"** shall be determined by dividing by two the sum of (1) the number of resident full-time students and the full-time equivalent number of part-time students who were enrolled in the public schools of the district on the last Wednesday in September of the previous year and who were in attendance one day or more during the preceding ten school days, (2) the number of resident full-time students and the full-time equivalent number of part-time students who were enrolled in the public schools of the district on the last Wednesday in January of the previous year and who were in attendance one day or more during the preceding ten school days, and (3) the full-time equivalent number of summer school pupils. **"Full-time equivalent number of part-time students"** is determined by dividing the total number of hours for which all part-time students are enrolled by the number of hours in the regular school term. **"Full-time equivalent number of summer school pupils"** is determined by dividing the total number of hours for which all summer school pupils were enrolled by the number of hours in the regular school term. **"Full-time equivalent number of kindergarten pupils"** is determined by dividing the number of such pupils in membership by two;

(8) **"Operating levy"** means the sum of tax rates levied for teachers, incidental, and building funds. To equalize the operating levy, multiply the aggregate tax rates for teachers, incidental, and building funds by either the percent of true value, as determined by the state tax commission on or before February first preceding the fiscal year in which the evaluation will be effective, or the average percent of true value for the highest three of the last four years as determined and certified by the state tax commission, whichever is greater, and divide by the percent of true value specified in section 137.115, RSMo;

(9) **"Orphans"** are resident children five years of age or older and under eighteen years of age who were enrolled in the public schools the previous September and who are supported in whole or in part by philanthropic or state organizations;

(10) **"Pupil-weighted levy"** shall be determined by multiplying the equalized operating levy in each district for the second preceding year by the eligible pupils of each district for that year and dividing the sum thereof for all districts of the state by the aggregate number of eligible pupils for that year of all districts of the state;

(11) **"Qualified aid to dependent children recipients"** are resident children five years of age or older and under eighteen years of age who were enrolled in the public schools the previous September and for whom aid to dependent children was allowed as certified by the division of family services;

(12) **"School purposes"** pertains to teachers and incidental funds;

(13) **"State-expenditure factor"** shall be determined by dividing the state total of current expenditures for the second preceding year by the number of eligible pupils in the state during that year;

(14) **"Teacher"** means any teacher, teacher-secretary, substitute teacher, supervisor, principal, supervising principal, superintendent or assistant superintendent, school nurse, social

worker, or librarian who shall, regularly, teach or be employed for grades kindergarten through twelve more than one-half time in the public schools and who is certified under the laws governing the certification of teachers in Missouri.

(L. 1963 p. 200 § 4-1 and p. 335 § 161.021. A.L. 1967 p. 245. A.L. 1973 H.B. 38, H.B. 158. A.L. 1977 H.B. 130, H.B. 131, H.B. 187. Text taken from H.B. 131. A.L. 1982. Adopted by initiative: Proposition C, November 2, 1982)
Effective 1-1-83

**163.031. Minimum aid—amount, how determined—source of funds, how spent.**—1. School districts which meet the requirements of section 163.021 shall be entitled to a minimum guarantee computed as follows: An amount determined by multiplying the number of eligible pupils by seventy-five percent of the state-expenditure factor, plus an amount determined by multiplying the number of qualified aid to dependent children recipients and orphans by twenty-five percent and multiplying the product thereof by seventy-five percent of the state-expenditure factor.

2. From the minimum guarantee for each district there shall be deducted an amount derived by multiplying fifty-seven percent of the pupil-weighted levy as adjusted by the district income factor by each one hundred dollars of the equalized assessed valuation of the property in the district the preceding year. Also, there shall be deducted fifty-seven percent of the amount received for school purposes from fines, forfeitures, escheats and intangible taxes.

3. To the amount calculated in subsections 1 and 2 of this section shall be added an amount to which a district is eligible under the guaranteed-tax-base provision which shall be calculated as follows: Multiply the difference between the guaranteed tax base less the equalized assessed valuation per eligible pupil of the school district for the last year divided by one hundred times the number of eligible pupils, times the difference obtained by subtracting fifty-seven percent of the equalized pupil-weighted levy as adjusted by the district income factor from the equalized operating levy for the district.

4. The sum determined in subsection 3 of this section shall be multiplied by the cost of education index for each school district as determined by the department of elementary and secondary education. The amount of money allocated pursuant to the cost of education index in any subsequent year will equal the ratio existing between the moneys allocated pursuant to the cost of education index and the total amount of moneys distributed pursuant to section 163.031 in the first year the cost of education index is applied.

5. No district shall receive annually an amount per eligible pupil which is greater than the amount received the previous year plus twenty-five percent of the difference between the amount currently apportioned per eligible pupil under subsections 1, 2, 3, and 4 and the amount per eligible pupil received the previous year. However, no district shall receive an amount greater than is provided by subsections 1, 2, 3, and 4 of this section. If the general assembly appropriates more or less funds than is necessary to meet the requirements of this section, the twenty-five percent limit shall be adjusted to allow for the distribution of available funds.

6. (1) During the 1977-78 school year, no school district shall receive less per pupil in average daily attendance than it was apportioned during the 1976-77 school year under the provisions of subsections 1, 2, 4, 6, and 7 of section 163.031, RSMo Supp. 1976. In 1978-79 and each year thereafter for five years, those districts which would, under subsections 1, 2, 3, and 4 of this section, be entitled to a smaller amount per eligible pupil than was received the preceding year shall receive a reduced amount per eligible pupil. Such reduction shall be twenty percent of the difference per eligible pupil between the entitlement under subsections 1, 2, 3, and 4 and the amount per eligible pupil received under subsections 1, 2, 4, 6, and 7 of section 163.031, RSMo Supp. 1976, during the 1976-77 school year but in no instance shall a district receive less than the entitlement under subsections 1, 2, 3, and 4 or two hundred eighty-three dollars per eligible pupil, whichever is greater. The two hundred eighty-three dollar base figure shall be multiplied annually by the same percent that the appropriation of state funds for the school foundation program is changed from the previous year and the product added to the amount per eligible pupil apportioned the previous year under this section. However, at no time, shall the percent of this annual adjustment exceed the percent of annual adjustment for the mean average of the lowest five percent of the districts which receive an apportionment based upon subsections 1, 2, 3, 4, and 5 of this section.

Minimum Guarantee

1. Number of Eligible Pupils x (75% of State-expenditure Factor) ..... $ _____
2. (ADC + Orphans) x .25 x (75% of State-expenditure Factor) ..... $ _____
3. Total Minimum Guarantee (Line 1 plus Line 2) ..... $ _____

Deductions

4. $\frac{\text{Equalized A/V}}{\$100}$ x (57% of Pupil-weighted $100 Levy x district income factor) ..... $ _____
5. Fines, Forfeitures, Escheats, et cetera (57% of the amount received the previous year for school purposes) ..... $ _____
6. Intangible Taxes (57% of the amount received the previous year for school purposes) ..... $ _____
7. Total Deductions (Sum of Lines 4, 5, and 6) ..... $ _____
8. Basic Entitlement (Line 3 minus Line 7) ..... $ _____

Guaranteed Tax Base (GTB) Add-on

9. (GTB minus Dist. Equal. A/V per eligible Pupil ÷ 100 x Number of Eligible Pupils x (Dist. Equal. operating Levy minus fifty-seven percent of the Pupil-weighted Levy district income factor) ..... $ _____ (cannot be less than "0")
10. District Entitlement (line 8 plus Line 9) x cost of education index .. $ _____
11. Apply hold-harmless or maximum increase clause to Line 10 ..... $ _____

7. The state board of education shall, at the time of making the annual apportionment, apportion special state aid as now or hereafter provided by section 163.161 building aid as provided by law, and the aid provided by section 162.975, RSMo.

8. A school district shall spend for teachers' salaries each year at least seventy-five percent of the state school funds received under subsections 1, 2, 3, and 4 of this section and under section 162.975, RSMo, and as much of the revenue produced by local tax levies as was spent per eligible pupil for teachers' salaries the previous year. In the event a district fails to comply with this provision, the amount by which the district fails to spend funds as provided herein shall be deducted from the district's apportionment for the following year, provided that the state board of education may exempt a school district from this provision if the state board of education determines that circumstances warrant such exemption.

**163.036. Estimates of average daily attendance—authorized, how computed—error, effect of.** – In computing the amount of state aid a school district is entitled to receive under section 163.031, a school district may estimate the number of eligible pupils for the ensuing year, or may use the average number of eligible pupils for the immediately preceding year, or may use the average number of eligible pupils for the immediately preceding three years. Any error made in the apportionment of state aid because of a difference between the actual number of eligible pupils and the estimated number of eligible pupils shall be corrected as provided in section 163.091, except that if the amount paid to a district estimating eligible pupils exceeds the amount to which the district was actually entitled by more than five percent, interest at the rate of six percent shall be charged on the excess and shall be added to the amount to be deducted from the district's apportionment the next succeeding year.

(L. 1967 p. 248, A.L. 1969 p. 268, A.L. 1977 H.B. 131, A.L. 1982 Adopted by initiative, Proposition C, November 2, 1982) Effective 1-1-83

General Assemblies meeting subsequent to the regular session of the Seventy Fifth General Assembly are not required to make any of the appropriations stated in Sections 149.010, 149.020, 149.030, 163.031, 163.036 and 163.161 enacted by the Seventy Fifth General Assembly and referred to as the School Foundation Law prior to making any appropriations for purposes lower in priority than the support of public schools as listed in Section 36, Article III, Missouri Constitution. The General Assembly must still comply, however, with Section 3(b), Article IX of the Missouri Constitution requiring that at least twenty-five percent of the state revenue be appropriated annually for the support of the free public schools. Op. Atty. Gen. No. 289, Waters, 4-2-70.

**163.087. Six-director urban and metropolitan school districts, distribution of school district trust fund.** – 1. Money in the school district trust fund shall be distributed to each six-director, urban and metropolitan school district in the state in the same ratio that the number of eligible pupils in the district bears to the total number of eligible pupils in all such school districts for the preceding year. As used in this subsection, the term **"eligible pupils"** has the meaning ascribed to it in section 163.011.

2. Money in the fund shall be distributed monthly on or before the fifteenth day of each month. The state board of education shall certify the amounts to be distributed to the several school districts to the commissioner of administration who shall issue the warrants therefor.

3. Money received by a school district from the school district trust fund shall be deemed to be local tax revenue derived for the same fiscal year in which the money is received, for the teachers, incidental and building funds, and may be deposited to such funds of the district in such proportions as the school board determines provided a minimum of seventy-five percent of such funds shall be deposited in the teachers fund. In the calculation of state aid for the district under the provisions of section 163.031, fifty-seven percent of one-half the amount received by the district in the first preceding year shall be deducted from the minimum guarantee in the same manner that is prescribed in such section for deduction from the amounts received by the district from fines, forfeitures, escheats and intangible taxes.

(L. 1982 Adopted by initiative, Proposition C, November 2, 1982) Effective 1-1-83

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# THE EQUITY OF PUBLIC SCHOOL FINANCE IN MISSOURI: 1977-1981

## Addendum

One of the goals of the research reported in "The Equity of Public School Finance in Missouri: 1977-1981", was to replicate a portion of a study done by the Education Commission of the States (ECS) in 1980, "The Missouri School Finance Study." The ECS study presented statistics for the years 1977, 1978, and 1979. We wanted to update those statistics for 1980 and 1981. In order to know that our results were comparable to the ECS results, we ran our own statistics for all five years, 1977 through 1981. Most of our results were in the same direction as those reported in the ECS study. However, our results differed from theirs on the statistics illustrating the extent to which revenues per pupil depended on local property wealth and income. Their results indicated a marked decrease in the strength of the relationship between revenues per pupil and property wealth per pupil from 1977 to 1978, whereas our results did not. Correspondence with ECS after the publication of our report indicated that our results may have differed from theirs because they included only K-12 districts. We included K-6 districts as well. They also reported that they used the student as the unit of analysis, whereas we used the district as the unit of analysis. That is, they ran the correlation coefficients with approximately 850,000 observations, with each observation representing one pupil, whereas we used only 554 observations, with each observation representing one district.

In order to determine whether these methodological differences explain the difference in our findings, we did an abbreviated analysis, including only K-12 districts and using the student as

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the unit of analysis. Because of the costs involved in running the analysis for 850,000 observations, our analysis was limited to the years 1977, 1978, and 1979.

Using the methods described by ECS did not produce a significant change from the results reported earlier on the correlation between revenues per pupil and property wealth per pupil. Table 1 illustrates the results produced by the three analyses.

Table 1

Correlation Coefficient Between Revenues Per Pupil and Property Wealth Per Pupil for Different Analyses

| | K-12 districts only, Student as Unit of Analysis (ECS) | All districts, District as Unit of Analysis | K-12 districts only, Student as unit of Analysis |
|---|---|---|---|
| 1977 | .70 | .77 | .81 |
| 1978 | .54 | .75 | .79 |
| 1979 | .52 | .74 | .76 |

According to our results, regardless of the method used, revenues per pupil were strongly dependent on property wealth per pupil in 1977, and there was no marked change in this relationship as a result of the 1977 reforms of the school aid formula.

With regard to the statistics illustrating the strength of the relationship between revenues per pupil and income, using the student as the unit of analysis did make a difference in the results. The relationship appears to be stronger using this approach. Table 2 illustrates the difference in the results for the three analyses.

Table 2

Correlation Coefficient Between Revenues Per Pupil and Income, for Different Analyses

| | K-12 districts only, Student as Unit of Analysis (ECS) | All districts, District as Unit Of Analysis | K-12 districts only, Student as Unit of Analysis |
|---|---|---|---|
| 1977 | .66 | .32 | .45 |
| 1978 | .61 | .27 | .44 |
| 1979 | .54 | .26 | .40 |

Our results, using the student as the unit of analysis, indicate a stronger relationship between revenues per pupil and income than appeared when the district was used as the unit of analysis, but our statistics indicate a weaker relationship than that reported by ECS. Our results also indicate very little decline in the strength of the relationship for 1977 through 1979. When the student is used as the unit of analysis, there appears to be a greater proportion of cases where high revenues per pupil are associated with high income, or where low revenues per pupil are associated with low income.

In conclusion, the methodological differences reported in correspondence with ECS fail to explain the differences between our findings and theirs.

Sharon Ryan
House Research Staff
June 1983